OHIO
MEDICAL AND SURGICAL JOURNAL.

Vol. 14. Columbus, May 1, 1862. No. 3.

Original Communications.

Extracts from a Medical Thesis on Inoculation for Scarlatina. By SALMON HUDSON, of Whittlesey, Medina county, O., and submitted to the Faculty of Starling Medical College of Ohio, A.D. 1862.

The subject I have chosen is certainly important, and I hope it may elicit future investigation by older and more competent heads than mine. I allude to the practicability and expediency of inoculation for scarlatina. I am not aware that it has ever been practised or recommended by any author upon this disease, either in this country or by any of our transatlantic brethren; and as every physician, who has practiced medicine to any extent, has witnessed to his sorrow the devastating effects of this terrible disease, any thing that might render it less formidable, and place it within the control of medical aid, would be hailed by the medical profession with the greatest pleasure. A disease that has, ever since its first invasion, at times baffled the best efforts and combined skill of medical talent in Europe as well as in our own country, and at times set at defiance all treatment, is one in which every medical man should take a deep interest. It not unfrequently has decimated the entire population of cities, towns and villages, making sad and desolate the once happy, social fireside. Truly may it be said to be the scourge of our land; as much to be feared as cholera or yellow fever, unless it, like small-pox, can be shorn of its

XUM

terrors and its dangers. The question, as to the practicability of cutting short this formidable disease, rendering it more safe and manageable, by inoculation for the same, is the one about to be considered. I am well aware that any innovation, in regard to long established opinions and practices, is generally met by ridicule and burlesque; nor do I claim any notoriety or merit in presenting, in my humble manner, this subject for the consideration of the Medical Faculty.

That scarlatina is not only contagious, but actually infectious, capable of being transmitted by inoculation, we have the most positive and conclusive evidence, which will be shown by the narration of the following facts:

In the winter of 1854, small-pox made its appearance in Medina village, the county-seat of Medina county, Ohio. This, as usual in small places, created no little excitement; every body wished to be vaccinated. Vaccine matter was obtained, and the physicians kept busy, myself with the rest. Mr. G. S., a prominent man in our township, sent for me to come and see him; said he had been exposed to the small-pox, and thought he had got it. When I saw him, he had a high fever, quick pulse, headache; complained of pains all over his body; said he wished me to vaccinate all his family, which I accordingly did. Saw Mr. S. the next day; found his body well covered with a rash, throat sore, and every symptom characterizing a plain case of scarlatina; salivary glands were discharging freely, which he attributed to the administration of calomel, of which he had not received one grain. I attended Mr. S. four or five consecutive days, and then dismissed him; telling his wife to save me the scabs from the arms of her two little boys, which she promised to do. In about three weeks I received an envelope, containing two very nice scabs, of which I was very choice, and the next day vaccinated some thirty children from those scabs—twenty-three of which were taken down simultaneously with scarlatina during the fifth and sixth days after being vaccinated. I was called to see them, and, of course, had business a plenty; was called every thing but a gentlemen, censured without

mercy, threatened with a prosecution, and escaped the expense of a defense in court by the intervention of my friends.

The history of those scabs, with which I vaccinated my patients, is this: those little boys of Mr. S., after I vaccinated them, came down with scarlatina, though light, after which their vaccination operated effectually; vaccina being for a time suspended during the invasion and termination of scarlatina, and then developing itself in the system, corroborating an old established principle that, as a general thing, the human system does not tolerate the invasion and development of two specific diseases at the same time.

The little boys contracted scarlatina from their father after being vaccinated, and not being much sick I was not called; and was not even aware that they had had scarlatina at all, or I never should have used the matter from their arms. But this did not exonerate me from censure. "I did it on purpose to make business," "deserved to be put through," as they termed it. Madam Rumor as she always is, was busy; epithets without number were heaped upon my head; which, of course, had a tendency to injure me in my business.

And next as to the history of those cases which contracted scarlatina by inoculation from those scabs, which will be interesting as well as instructive. During the fifth and sixth days after I vaccinated them, twenty-three out of the thirty were taken down simultaneously with scarlatina, all of which did well; no unpleasant symptoms, such as retrocession of the rash, metastasis, or abscesses about the neck, but all terminated pleasantly within ten or twelve days from the time I vaccinated them. But no sooner had scarlatina subsided, than vaccina began to assert its prerogative; a nice little pustule began to form on the arm, and all the symptoms attending this disease became manifest, and occurred in every case that had scarlatina.

Another important feature in those cases was, that in several of the families whose children were vaccinated, some were absent. One, in particular, two little boys and a little girl; the former two not being at home, the matter was only put in the arm of the girl,

XUM

who came down with scarlatina as the rest; had it very mild; from which her two little brothers contracted the disease in the most malignant form, of which both finally died. In several other families the results were very similar; those who were vaccinated had it very mild and light, while those who took it in the natural way had it in the most malignant form, several of whom died.

Now, from the above, it strikes me that scarlatina, like small-pox, may be modified and cut short—made less formidable—and, in those fearful epidemics which so frequently destroy so many of our children, its progress may be arrested, its symptoms mitigated, and the disease shorn of its terrors.

Now, as to the practicability, I would suggest that in one of those fearful epidemics I would immediately procure some vaccine matter, put it in the arm of some person just exposed, or coming down with scarlatina. As soon as the patient has had scarlatina, vaccina will come on; provided the patient has never been vaccinated before. In this manner I have no doubt but the disease may be essentially modified—rendered comparatively safe and harmless.

With these suggestions, I submit the entire matter to the medical profession, hoping that it may receive the attention of those more competent and better qualified to investigate it than myself.

American and Foreign Intelligence.

New York Academy of Medicine.—Case of Supposed Murder.

Professor A. Clark presented the medico-legal points in a case of suspected murder, as found four months after death.

Mr. President: I fear, sir, that you have flattered me too far in inducing me to believe that the subject that I am able to present will interest the members of this body. Still, there are certain points in the case that I intend to recite that were of interest to myself; and as I have devoted a considerable time to the investigation of some of them, it may not be wholly unprofitable to present the conclusions to which I have arrived.

The case to which I refer is substantially this:—

A woman is found in her bed of a morning with her throat cut, lying upon her back a little inclined to the right; the head turned a little more in the same direction than the body. A considerable quantity of blood had flowed from the wound upon each side of the neck; most upon the right. She was lying on the left hand pillow near its right extremity. There was sprinkling of blood to a limited extent; some upon her face, in the curls of her hair, on the right hand pillow at a distance of about two feet from the wound, and on the left hand pillow at a distance of nine inches to a foot. The knot of the hair at the back of the head was saturated with blood, clots of considerable size were found along the right shoulder, and blood had flowed down to the hips and had entered the feather-bed, so as to saturate a considerable spot at this place, i. e. in the position of the hips, causing a sensation of weight to the hand placed under the bed, and moistening the hand with blood.

The quantity of blood lost could not be accurately estimated, but the bed, after it had been exposed to the rain and weather for several weeks, still contained a coagulum with feathers which was compared in size to a duck; another coagulum was found in the feathers of the left hand pillow about the size of the fist. One or two clots, compared to the size of the two hands, were found upon the surface of the bed. A spot of blood about nine inches in length, and of less width, was observed upon the sheet turned down over the body near to the hips: and some spots of blood were noticed in the blankets under the sheet.

The right hand was lying by the side, the arm somewhat bent at the elbow, and the hand at a distance of about six inches from the hips. Under the wrist and hand was found a razor, partly open and partly covered with blood. This hand was bloody, but not covered with blood, more in the inside than on the backs of the fingers.

On the left hand a few spots of blood are described at the ends of the fingers. The curls, which had been put up for the night, were not ruffled or in any way disturbed. There was no scratch, or abrasion, ecchymosis, or other mark of violence upon the face, hands, or any part of the body, except the cut already referred to.

There were marks of bloody fingers on the face, described as if beginning on the left side, and drawn across the nose, but so vaguely described, that it could not be determined whether they were made by the right hand or by the left. Marks of bloody fingers were described on the inferior and left corner of the right hand pillow, and also on or about the middle or center of the same pillow. When, however, the pillow tick, produced in court, was seen to be sprinkled with blood at about the same spot, a question was raised whether these latter marks were produced by sprinkling or by the hand.

The woman had not removed her drawers or flannel petticoat, and the night dress was turned down from the neck. Little or no

XUM

blood is described as seen on the chest below the upper edge of the flannel dress, which was under the night gown.

The cut in the neck was five inches and a half in its curved measure and three inches in its direct length. It began on the left side at a point nearly opposite the cricoid cartilage upon the sterno-cleido-mastoid muscle near its posterior border, passed directly inwards towards the centre of the neck and in the line of a radius from that centre to the depth of about three quarters of an inch; it then swept over the fifth cervical vertebra, shaving off a small portion of the transverse process, passing over the body of the vertebra, penetrating its covering and making a slight impression upon the bone itself, and from that passing out in a direct line on the right sterno-cleido-mastoid muscle, cutting the inner portion of the muscle, and extending half an inch in the skin beyond the parts of the muscle cut—in other words passing outwards nearly in a direct lateral line. The left extremity of the incision was three and one quarter inches below the lobe of the ear, and the right extremity three and one half inches below the corresponding point on that side. The cut had severed the cricoid cartilage and all the muscles in its track, together with the deep jugular vein, the pneumo-gastric nerve, and the carotid artery on each side.

The bed was four feet and four inches in width, and stood in the corner of the room, so that the head of the bed was against the wall and the right side of the bed also against another wall. The room was about seven feet wide and nine feet long. In the space between the bed and the wall on the left side, at the head of the bed, was a stand about two feet and one half in length and eighteen to twenty-four inches wide, on which were found a tumbler, vials, and other furniture in order and undisturbed. The cut appeared to have been one incision.

Two important facts are yet to be stated. The right sleeve of the night gown, buttoned at the wrist, was bloody on the part looking toward the body. Between the wrist and elbow a part of the sleeve was "soaked" with blood, and near the elbow was a sprinkling by drops, which were elongated towards this joint.

The other fact is this, while women were "laying out the body," one of them lifting the arm of the dead person, saw bloody froth or rather large blood bubbles rise from the trachea into the wound. Interested in this occurrence, she again lifted the arm with the same result.

A coroner's inquest was held, and the woman was buried under the verdict of suicide. Four months after this, on the 10th of April, 1860, under the suspicion of murder, her body was exhumed and a post-mortem examination made. The body was found in a good state of preservation. The lungs were reported as congested and engorged with blood. Bloody fluid was found in each pleuritic cavity, estimated at five ounces on the left side and eight on the right. The lungs were slightly adherent, otherwise they were healthy. The heart was empty and sound in every particular. The brain exhibited no appearance of any disease, but had under-

gone considerable change from decomposition. All the other organs examined were found healthy and free from blood. The stomach and intestines were reserved for chemical examination. The tongue opposite the molar teeth was found to be ecchymosed in a space on the left side about one inch in length and somewhat more than half an inch in width. On the right side was a similar spot of about one half that extent. In the right lung were several spots of pulmonary apoplexy.

A second post-mortem examination was made ten days after, or four months and ten days after death. The face, upper part of the chest, inferior portion of the inside of the thighs, upper portion of the legs, and back of hands, were covered with white or bluish green mould spots; the skin underneath had become of parchment appearance, semi-transparent and reddish brown. The eyes were entirely shrunk and sunken, leaving deep cavities completely lined by the eyelids. There was slight cadaveric rigidity. The inferior half of the trunk, the lower portion of the legs, outside the thighs, the whole lumbar region, and upper portion of the pelvic region posteriorly, were free from any marks of decomposition, and entirely of natural appearance, except a slight uniform greenish stain; and all parts were free from static or post-mortem congestions, or blood stains. The cut in the neck was found as before described, passing nearly transversely from left to right, across the neck, inclined from above a little downwards. The muscles and tissues were so far changed by the previous examination and some drying as to render it impossible to distinguish precisely the vessels and nerves that had been divided. Opening the sutures of the cut previously made, the viscera of the abdomen, it was found, had been almost wholly removed; there remained, however, the uterus, bladder, and rectum in the pelvic cavity, and these it was noticed were unusually bloodless. In the thoracic cavity one lung remained, and this was lying in the right chest; it was the left lung, which had been turned over upon the heart. In the left pleuritic cavity, which was otherwise empty, was found a drachm and a half of bloody-looking fluid. In the right there was twice this quantity of a similar fluid, but thicker and of darker color. The left lung was entirely uninjured, its bronchus and its vessels being still uncut. It was greatly contracted, but presented no evidence of congestion, except in the inferior and posterior portion, where the blood usually accumulates after death; and this accumulation occupied a smaller space than is usual in the majority of persons who have died of diseases not affecting the lungs.

The organ was of a dark greenish color in its posterior portion, in other parts approaching a slate color; it was perfectly soft and natural in feel; it occupied one-fifth of the thoracic cavity. Removed, it floated in water, weighed seven ounces, four drachms, and fifty-five grains (Avoir.). Immersed in water, it displaced eleven fluid ounces and no more; there were a few vesicles of emphysema in the inferior and anterior edges, resulting from commencing decomposition. The heart, still attached to the aorta, had been opened;

XUM

it was stained with fresh-looking blood in the upper part of the left ventricle, and had a spot of commencing decomposition on the inner surface at the apex. The veins of the heart were not distended, and contained very little blood and some air. The aorta, which had not been examined previously, was opened from the heart through its whole length, together with the continuous arteries down into the pelvic. In the upper part of the aorta there was just blood enough to cover the inner surface slightly, but not enough to flow, or show much coagulation. The lower half was entirely empty, and not blood-stained. No blood was found in the arteries or veins of the pelvis or of the abdomen, and no blood stains. The lung was easily and completely inflated, except a small portion of the inferior and posterior portion which had been the seat of post-mortem congestion; with the exceptions above stated, it appeared remarkably healthy. The bronchial tubes were opened as far as the scissors could penetrate; they were found of a reddish hue, the inferior branches of a deeper color than the superior, but containing no blood, or only a trace of blood. The specific gravity of this lung was found to be .665.

Admitting that the quantity of bloody fluid found in the chest had drained from the lungs, it being upon this side by estimate five ounces, let this be added to the weight of the lungs as before stated (i. e. seven ounces, four drachms, and fifty-five grains), and also the three drachms found at the last examination in the right cavity, its total weight must have fallen a little short of thirteen ounces. Hutchinson estimates the weight of the healthy female lungs, based upon six examinations of women, weighing on an average ninety-four pounds, as seventeen ounces for the left lung and nineteen for the right. This woman weighed ninety-six pounds, and it may be fair to infer that her lung might have weighed seventeen ounces, and yet not have been materially congested. As to the weight of the right lung, it is reported to have been nine ounces. If the quantity of fluid found in the right cavity on the first post-mortem examination was eight ounces, this added to the weight of the lung would give us seventeen ounces as the weight of the right lung, which will be two ounces less than Hutchinson's average for a woman of her size and age. There was no dispute in regard to the bloodless character of the organs that were removed from the body, with the exception of the lungs.

The husband of this woman was charged with having murdered her. The theory of the prosecution was that she was first suffocated, and that her throat was cut afterwards.

EXTENT OF CUT.

It was urged that a cut of the extent here described could not be made by the woman herself upon her own throat, and it appears to be a general belief that such cuts are to be ascribed to homicide rather than suicide; still there are many facts on record that will

authorize the belief that cuts of great extent can be made by persons attempting their own lives.

Among the cases illustrating this point stands prominently that recorded by Marc (*Annales d'Hygiène*, vol. iv. p. 407; *Taylor*, p. 265; *Beck*, vol. ii. p. 133), in which a young man standing before a window, with a razor, inflicted a wound two inches above the sternum, extending from the outside of one sterno-cleido-mastoid muscle to the outer border of the other, dividing every thing, and slightly wounding the anterior ligaments of the vertebra. On this case the reporter remarks: "It is one of the remarkable instances, though occasionally observed heretofore, of the degree of energy to which the intention of suicide can be carried, with persons especially who terminate their own lives by cutting their throats. It proves, in truth, that it is wrong to deny the possibility of suicide in this manner for the reason that the incision has divided part after part, the larynx, the œsophagus, and has struck upon the cervical vertebræ."

Devergie reports in the same vol., page 414 (*Taylor*, 265), an enormous wound in the neck, two inches deep, going to the posterior layer of the pharynx next to the spinal column, three inches and three lines open and just one foot in circumference, cutting the bone of the jaw, submaxillary glands, all the muscles of the hyoid bone from the jaw and tongue; the tongue itself and the jugular veins. This great wound was made in three cuts. The man was seen to do this or "otherwise," says Devergie, "would not the suspicion of murder have been raised immediately, and would not the physician consulted have found in the wound circumstances which would militate much more in favor of homicide than suicide?"

Taylor (p. 264) quotes Dr. W. Burke Ryan's report of an extensive suicidal wound reaching to the cervical vertebræ, one of which had been cut by the razor.

Professor Dieffenbach (*Archives Générales de Médicine*, Oct., 3, p. 256) gives an account of thirty-one cases of cut-throat, the subjects of surgical treatment. Of these the wound in one was "several inches long;" in another reported "very extensive, to the posterior wall of the œsophagus;" in a third, six inches in length; in a fourth to the cervical column. This latter was in a woman of sixty, and extended from one sterno-cleido-mastoid muscle to another, at a point just below the larynx.

Brièrre de Boismont, in examining the different kinds of suicide (*Annales d'Hygiène*, vol. xli. p. 143), searched the Procès Verbaux relating to 4595 suicides. Of these, simple section of the neck numbered fifty-seven, section of the neck and other wounds, fourteen more, making seventy-one. Of this number, in twenty-eight cases, the details of which are sufficiently precise, the instrument had divided more or less completely the muscles, the vessels, arterial and venous, the pharynx and trachea, and was only arrested by the vertebral column. In several cases the wound, frightfully gaping, exposed to view all the wounded parts. Many of these large wounds had been made by a single cut.

On this point, we may cite Taylor (p. 265), in the following words: "As to the extent of the cut, i. e. the number and importance of parts injured, it has been hastily laid down that an extensive wound of the throat involving all the soft parts to the vertebral column could not be inflicted by a suicide; * * * * but occasionally all are divided to the vertebra. There are cases perhaps in which with a firm hand there is a determined purpose of self-destruction."

Briand and Claudé (p. 262), quoting these and similar cases, state that wounds, the most extensive and the most multiplied, may be suicidal. Similar citations might be multiplied, but these must be sufficient. It may be worth while to refer to a few other cases which, though not parallel to the one which we are considering, still show great energy in the attempt at self-destruction. Such is the case reported by Degranges (*Annales de Hygiène*, vol. xiv. p. 410; *Taylor*, p. 787), in which a young man inflicted a wound to the vertebral column about six inches long, not cutting the deep jugulars or the carotids, but severing the thyroid arteries, bled as was believed to fainting, staunched the blood with his handkerchief, went up stairs, found a cord, descended, placed a ladder against the wall, adjusted the cord to a nail, and afterwards hanged himself.

Dr. T. C. Finnell (*Trans. State Med. Soc., N. Y.*, 1861, p. 61), one of our own fellows, reports the case of a shoemaker, who stabbed himself in the neck with his knife with such energy as to pierce the fifth cervical vertebra to the depth of one inch, breaking the knife outside the bone.

Mr. Jameson's case (*Beck*, vol. ii. p. 130) is extraordinary. A woman cut out part of her larynx, i. e. the cricoid cartilage entire, the left wing of the thyroid, the right arytenoid, and part of the upper rings of the trachea, and a portion of the muscles attached, and while the surgeon was dressing her wounds, took these parts from her pocket and exhibited them to him.

Taylor (p. 269) notices the case of a lady who made two very deep extensive cuts in the neck, dividing the principal blood-vessels on the right side, using as her weapons two pen-knives. The wounds were fatal.

Leuret (*Annales de Hygiène*, v. 236) reports that an officer cut his throat with a small scissors used for embroidery, dividing the trachea and right carotid completely, the œsophagus and left jugular vein partly, the wound being about two and a half inches in length.

Dr. Spittal (*Edin. & London Monthly Jour. of Science*, July, '41) gives the case of a woman confined for theft, who during the night had symptoms of delirium tremens, but was rational in the morning, so that the matron going to church, gave her the Bible, desiring her to read the first Psalm. She was also furnished with milk in an earthen jug and a spoon. The matron on returning from church found her dead, the floor covered with blood, and her

neck horribly cut. The wounds had been inflicted by the fragments of the earthen jug which she had broken, and had been bored and deepened by the handle of the spoon.

BLOODY FLUID IN THE PLEURITIC CAVITIES.

An important point in this case seems to have been, that the effusion in the pleuritic cavities must have taken place prior to the cut in the neck. Here, so far as I can ascertain, is raised for the first time the question, whether suffocation can produce bloody effusion into these cavities. It becomes interesting to inquire whether there is any precedent for such an opinion. I have searched through the ample records of suffocation, hanging, drowning, and strangulation, and through essays devoted to these subjects, and have failed to find a single instance. Cazauvieilh "On Suicide," reporting in detail fourteen cases of strangulation and submersion, noticing the thoracic organs in every instance, makes no mention of such an effusion. Brièrre de Boismont (*Annales d'Hygiène*, xl. 425), in a summary of remarkable things noted in 797 Procès Verbaux of cases of strangulation and suspension, makes no allusion to any such occurrence; the examination in all these cases being soon after death. Olivier de Angers (*Annales d'Hygiène*, xviii. 845) examined sixteen of the twenty-three persons suffocated by pressure in the Champs de Mars on the 14th of June, 1837, and found effusion of blood in the pleura in none, though ribs were broken in seven from two to thirteen in each.

It seems, then, to be safe to infer that neither blood nor bloody effusion in the pleuritic cavities is ever the direct result of suspended respiration, no matter how produced; that when such effusion is found, excepting when attended by laceration of the lung through violence, it is always either a pathological condition and attended by particular symptoms during life, or a post-mortem result, that may be considered in the light of a drainage. Even in drowned persons, in whom it is most frequently met with, there is no evidence that it is ever observed till after days, and many times weeks, have elapsed.

Devergie remarks (*Annales d'Hygiène*, xvi. 444) that bloody effusions, the result of decomposition, are very common, always in serous cavities, the pleura, pericardium, and sometimes in the peritoneum. They are the result of decomposed blood, which is very fluid, and transudes the tissues, staining them, and occurs only after the generation of gas.

Devergie and Orfila are the authors to whom we are chiefly indebted for a knowledge of the fact here referred to. Devergie (*Annales d'Hygiène*, ii. 164) made examinations of sixty-two bodies of persons found drowned, and took note of the condition of the thoracic cavities in each. Of these forty-five were recognized, and their histories consequently known. The examinations were made in the months of January, February, March, and April, that is, in the cold season of the year. He found at the end of a month of

submersion, that the lungs were very emphysematous, filling the cavity of the chest, and extending more or less in advance of the pericardium. At the end of *two months* the cellular tissue in many parts had imbibed the blood of the adjoining vessels, and had become of a uniform red color. Veins had become emptied of blood, and ordinarily were distended with gas. The arteries were red by imbibition through their walls; the pericardium partaking of the color of the arteries, contained bloody serum. In *three months and a half* the lungs no longer filled the cavity of the chest; the space between them and the pleura costalis was filled with reddish serosity, and the serum in the pericardium was less than at earlier periods, was also less liquid, and of a deeper color. At *four months and a half* the pleuræ contained a large quantity of brownish serosity, at least a pound in each.

He remarks that these effusions are almost constant in the drowned, when the bodies have remained more than six weeks in the water, and expresses his belief that they are the results of transudation of the blood and liquids of the vessels in consequence of the development of gas in these tubes. Yet he remarks, these gases did not remain there always, for after four months and a half the walls of the vessels were effaced and collapsed on each other. That these effusions, however, are not in the drowned purely the result of drainage, is rendered probable by a case recorded by Alexander Watson, in which it is stated that a man thirty-five years of age was drunk, and fought with several persons, and disappeared March 12, 1833, and eight days after was found in a pool of water, at the depth of twenty-eight or thirty feet, with marks of violence upon his head, and other signs which gave rise to the suspicion that he had been murdered, and afterwards thrown into the water. "Eight pounds of fluid blood were taken out from the cavities of the pleura, and several ounces of the same fluid were found in the pericardium." The specific gravity of this fluid is reported to have been 1011. This statement proves conclusively that the fluid was not blood; even that it was not undiluted serum retaining the color of blood. The specific gravity of blood is 1050 to 1057 in health, and in disease it does not fall below 1031: that of serum varies from 1021 to 1030, the healthy standard being 1027. In dropsies, in diseases of the kidney, and after profuse hemorrhage, it has not been found below 1013. There is no reason to infer that the serum in this man would fall below the healthy standard: blood must have been diluted by four times its bulk of water to have reached the specific gravity here mentioned, and the bulk of serum must have been doubled to have reached the same standard.

But these effusions are not confined to the drowned. Orfila (*Annales d'Hygiène*, iv., 114), in judicial examinations has often seen this fluid in the pericardium, and has found the blood black and fluid in the vessels for one to eight months after death. He appears to have met with effusion in the pericardium more fre-

quently than in the pleura. In his *Exhumations Juridiques*, (*Médicine Légale*, vol. i, pp. 405, fourth edition) however, he reports several instances in which this fluid was found in the latter cavities. *Necroscopy* 1.—Eighteen days after death a considerable quantity of bloody serum was found in both pleuritic cavities; the person had died of double pneumonia. *Necroscopy* 2.—Thirty-seven days after death there was also double effusion of a similar character. The person was supposed to have died of pneumonia, which, however, was single. It was also found in the pericardium. *Necroscopy* 5.—One hundred and twenty-four days after death a similar effusion was found in the pericardium, and not in the pleura, the person having died of pneumonia. *Necroscopy* 27.—Thirty-two days after death, eight ounces of bloody serum were found in each pleural cavity. The person had died of apoplexy. He also reports the case of a drowned person, who nineteen days after death had eight ounces of bloody fluid in the right pleura, and none in the left.

Prof. Toulmouche (*Annales d'Hygiène*, July, 1860, p. 210), in his report of judicial autopsies made in cases of natural death, found bloody fluid in the thoracic cavity in three out of ten cases recorded. Thus in *Case* 4, in the right of pleuritic cavity there was a moderate effusion of bloody serum. The lung of this side was in a condition which led the reporter to believe that the patient had died of pneumonia. He does not state how long the body had been buried. *Case* 5, which has its duplicate, was in an advanced state of decomposition; there was emphysema under the surface tissues, blisters in all parts filled with bloody serum, adhesions on the entire face of the left lung, and a small quantity of reddish fluid in the pleuritic cavity of that side. There was pneumonia of both lungs, but no bloody effusion is reported on the right side.

It will be noticed that in many of these cases the lungs may be supposed to have been more than usually charged with blood at the time of death. And it cannot be denied that both reason and observation would lead us to expect such effusions most frequently in such cases; still it is to be noticed that even in the cases here referred to, drainage is recorded from lungs that were not diseased, and not supposed to have been engorged in any unusual degree.

That drainage may occur from such lungs appears still further evident from a case reported by Champouillon (*Annales d'Hygiène*, xxxiv. 377.) It was that of a soldier in Algeria, who lacking courage to accompany his comrades in a charge, allowed himself to fall from his horse in a marsh. He remained there for several hours, and a few days after died of malignant miasmatic fever. At post-mortem examination, fourteen hours after death, the weather being warm (June 10), the body was much discolored by decomposition; many parts were swollen by gaseous evolutions, and were crepitant on pressure of the fingers. His lungs were highly emphysematous, and pushed out of the open thorax. The pleuræ pulmonales

were lifted here and there by the evolution of gas. In each of the pleural cavities there was a sero-sanguinolent fluid, the quantity of which was estimated at two litres, or about four pints, and this fluid was covered by an oleaginous layer of considerable thickness. The peritoneal cavity contained about half a litre (one pint) of the same kind of fluid, without the oily matter.

Gendrin injected into the groin of a cat, blood taken from a butcher who had been attacked with gangrenous pustule and putrid fever. The animal died in a short time: a few hours after the body was sensibly fœtid. At the autopsy there was found in the left pleura "black blood very serous."

Devergie (*Annales d'Hygiène*, iv. 203) discovered bloody fluid in the thoracic cavity of a fœtus at term, that had not breathed, but had lain in the water six or eight days.

These cases and statements embrace nearly all that I have been able to find bearing upon the post-mortem drainage of the lungs while yet in the natural cavities, but it has appeared to me important to ascertain what quantity of fluids may percolate the tissues of the lungs and pleura after death, from lungs regarded in all respects as healthy when removed from the body. To this end I have instituted a few experiments.

The following will be sufficient to illustrate the points these experiments may settle.

I. A woman, sixty years of age, weighing ninety pounds, died on the 17th of May, 1860. The right lung appeared perfectly healthy; weighed seventeen ounces, displaced f. ʒ xxxvii. of water, giving a specific gravity of .442. The root of the lung was firmly tied, and the organ was placed, the root uppermost, in a glass jar, and carefully covered. The drainage in ten days was four ounces of a dark, bloody serum. The left lung, weighing twenty ounces, was thought to be slightly congested, and was not used for the experiment.

II. A woman, æt. 25, died April 6, 1860, of mania, each lung weighing fourteen and a half ounces. The left lung displaced f. ʒ xviiss of water, giving a specific gravity of .797; the right displaced f. ʒ xxi. having a specific gravity of .663. The root of this lung was tied, and the organ suspended by the ligature in a glass-stoppered jar, and the drainage in seventeen days was f. ʒ iij. and f. ʒ i. The weather being a part of the time hot, decomposition was now advancing, and the experiment was suspended.

III. A woman, æt. 50, weighing one hundred and twenty-one pounds, died, having pneumonia of the right lung. The left lung appearing perfectly healthy, weighed seventeen and a half ounces, and displaced ʒ f. xxvi. of water, giving a specific gravity of .644. It was tied and suspened as in the last experiment in a stoppered jar. In fourteen days the drainage was f. ʒ viiss. The lung then weighed nine and three quarter ounces, and displaced f. ʒ xivss., the specific gravity being then .653.

IV. The fourth experiment was conducted for me by Dr. Segur. A woman, æt. 21, weight estimated at one hundred and ten pounds, died of meningitis. The right lung weighed thirteen and a half ounces, and displaced f. ʒ xviiss. ounces, giving a specific gravity of .729. Suspended in a stoppered jar for fifty-five days the drainage was f. ʒ ixss.; the lung then weighed four and a quarter ounces, and displaced f. ʒ vj. of water; the specific gravity being then .680. Here it will be seen that in fifty-five days more than two-thirds of the ordinary weight of the lung has drained from it in fluid matter, leaving the lung tissue not yet dried weighing no more than four and a quarter ounces.

These experiments illustrate what may take place within the body after gaseous matter has been developed to some extent in the pleuritic cavities and in the vessels of the lungs to facilitate the transudation of the fluids. It will be borne in mind that while it is denied that the lungs in the case which is the occasion of these remarks, were congested in the sense in which that term is usually used, that is, that the vessels at the time of death contained more than their usual quantity of blood, yet it is not denied that they contained more of this fluid than would have been looked for had the woman died of hæmorrhage from the femoral artery or other vessels, the severing of which did not imply the severing of the trachea.

PULMONARY APOPLEXY.

It was claimed by the prosecution that in the right lung there were several points of pulmonary apoplexy, and that statement was admitted as true on inspection of the part of the lung. The explanation given by the prosecution and defense was very different; the former claiming that these effusions were the result of suffocation; the latter, that so far from having been produced by this cause, their very existence proved that no suffocation had been attempted. No cases were cited, and it is believed that no instance can be found in which suffocation has produced circumscribed pulmonary apoplexy. If the explanation which Watson (*Pract. Phys.*, 3*d Amer. Ed.*, p. 613) and Carswell (*Path. Anat.*, part Hæmorrhage) have given of this occurrence is admitted, it will appear obvious that the fact is inconsistent with asphyxia in any form. Watson, speaking of the ordinary occurrence of pulmonary apoplexy, says: "The seat of the effusion is in one or more of the larger branches of the air tubes and the blood, or a part of it is driven backwards into certain of the pulmonary lobules by convulsive efforts to respire. * * * It is easy to understand how certain portions of the lung, without undergoing any actual change of condition, may be so choked up and crammed with blood as to preclude any subsequent admission of air." He here speaks of the variety called circumscribed apoplexy of the lung, which was the variety observed in the lung in question. This choking up and cramming with blood is a filling of the air cells of the lungs. This

can be made evident by the same procedure by which we determine the seat of the effusion in pneumonia: by the aid of a lens the little coagulum formed in a single air cell can be turned out with the point of a needle and its character ascertained under a microscope, and thin sections of pulmonary apoplexy under the microscope can be easily made to show that it is the air cells that contain the blood and not the general tissue of the lung. Now it is claimed that pulmonary apoplexy of this variety can be produced in cut-throats merely by a forcible inspiration taking place while the trachea is more or less filled with blood from the cut, and inasmuch as "convulsive efforts to respire" are necessary so to fill the air cells, it is plain that such efforts are not likely to take place during an attempt at homicidal suffocation; and further, on this supposition there is no source from which the blood can flow to be drawn into the lungs. Those who have noticed the effect of cutting the trachea and large vessels of the neck in the inferior animals will easily understand this. After the wound is made, for some seconds there is no effort at inspiration, but before death takes place there are usually three or more, and one or more of these will be observed to be convulsive and noisy from the blood that has already entered the severed windpipe; and as an observed fact circumscribed apoplexy of the lung does take place in these animals under these circumstances, and will occur in the right lung when the body of the animal is inclined to the right, or in the left lung when inclined to the left.

In confirmation of this view of pulmonary apoplexy, I may be permitted to cite a case that occurred under my own observation. At Bellevue Hospital, some years ago, we had a patient who had occasional vomitings of blood, from ulcer of the stomach. One day, while enjoying the sun and air on the south side of the building, sitting with other patients on a bench, he suddenly discharged from his stomach a large quantity of blood. A loud gurgling noise was heard in his breathing, and he fell dead. At post-mortem examination, coagulated blood was found in the stomach. The trachea and bronchial tubes contained frothy blood, and both lungs were studded with numerous masses, large and small, of circumscribed apoplexy. There was no other lesion of the lung. It seems to me clear, that this man, feeling the urgent want of breath while the throat and mouth were full of blood, had drawn this fluid into the lungs by one or more violent inspirations.

MOVEMENTS, VOLUNTARY OR INVOLUNTARY.

Regarding the power which this woman might possess after inflicting this wound upon the throat, of passing the hand over the face, placing it in one or two spots on the pillow, and of letting it fall again in the position in which it was found, it is not inappropriate to consider two classes of facts: 1. Those which relate to voluntary motion after fatal wounds have been inflicted, and 2.

Those that refer to convulsive and involuntary movements resulting from hæmorrhage.

On the first of these points Taylor (page 347) remarks: "There are several cases on record which show that wounds involving the common carotid and its branches as well as the internal jugular vein do not prevent the exercise of voluntary power and running a certain distance," and page 270, "Suicides do not immediately perish from wounds that are commonly termed mortal, on the contrary they have power to perform acts of volition and locomotion which might seem incompatible with their condition." Among a considerable number of instances recorded in which persons with wounds in the neck, that were almost immediately fatal, have performed such acts of volition and locomotion, two are referred to by Brierre de Boismont (*Annales d' Hygiène*, xli., page 143) who cut their throats before a mirror, walked across the room by the aid of the furniture, covering the floor with blood, and, reaching their beds, lay down and died.

In a case referred to in Beck, (vol. ii., page 350,) a woman in whom the left carotid artery was cut, and many branches of the carotids and jugulars, walked twenty-three yards, crossed a stile three feet ten inches high, and then died. A man afterwards found that the time required for him to do this was thirty seconds.

The case already quoted from Degranges, in which a man after cutting his own throat went to and returned from another story of the house, and with apparent great deliberation hanged himself, illustrates the same point. It is not evident in any of these cases that both carotids were cut, still they leave us to the inference even when both were cut that certain voluntary motions can be performed, and probably all that were supposed to have been performed in this case. But with reference to convulsive movements there can be no doubt that they are common in death from hæmorrhage, and more common the more rapidly fatal the bleeding. These convulsive movements are known to last as long as the bleeding continues, and analogy permits us to infer that in these cases they may have continued at least thirty seconds after the wound was inflicted.*

SPRINKLING OR SPIRTING OF BLOOD.

The sprinkling or spirting of blood from wounds in the neck appears to have attracted but little the attention of medical jurists. In by far the largest proportion of cases it is not mentioned, even when the description is in great detail. In this case, however, it became a question of importance, on the theory that the woman

* For a treatise on the subject of convulsions from hæmorrhage, vide *Kussmaul* and *Tenner* (*New Sydenham Society Pub.*) See also, *Hippocrates. Marshall Hall, Medico-Chirurg. Trans.*, vol. xiii., page 126. *Travers' Constitutional Irritation*, page 339. *Beck*, vol. ii., page 322.

was suffocated and that her throat was cut afterwards. It was urged that in such a case the spirting of blood would be little or none at all, while on the other hand it was claimed that if the throat was cut in full life the blood should have been thrown to a considerable distance upon the bed, and even upon the walls of the room. It was even claimed by one of the medical witnesses that a cut made in this situation, the heart being vigorous, the head in the line of the body, the body lying upon the back, that the blood would have been thrown from each carotid past the lips of the wound, past the jaws and head, and would have struck in full force against the head board. My researches have led me to the inference that when the carotids are entirely divided the spirting or sprinkling of blood from them is almost nothing; but that when either of them has been partially divided so as to give such direction to the current of blood as that it will flow forward, unobstructed by the lips of the wound, then the jetting or sprinkling of blood may be considerable. Thus in the case already quoted from Marc, of the young man who cut his throat standing before a window, the furniture and window were spotted with blood to the height of about three feet, an overturned chair was sprinkled with blood, a night-cap on a step before the window, raised about one foot, was spotted on its upper side. In this instance neither carotid was entirely severed, both were cut into "and the right half cut, the left more than half cut."

In a case reported by Rami, Adelon, Dubois, and Boyer (*Annales d' Hygiène*, xv., 394; *Beck*, ii., 134), in which only about one pound of blood was lost, the throat was supposed to be cut while the woman was standing a short distance from a wall; the wall was sprinkled to the height of three feet four inches at one spot and at another spot to the height of two feet six inches. In this case the right carotid was cut in two-thirds of its circumference, on its inner side.

In the case of Mrs. Duval, referred to by Beck (ii. 214), reported by Devergie (*Legal Medicine*, ii. p. 168), the larynx and hyoid bone were broken, the superior thyroid artery was cut, but the carotids were not. The blood had been thrown in jets over the features, but it is not remarked that it was thrown upon the furniture. This was a case of homicidal cut-throat; the thyroid artery was enlarged to supply an enlarged thyroid gland.

In the case of Sellis, the valet of the Duke of Cumberland (*Beck*, ii.) there was a wound in the throat six inches long, dividing the arteries on both sides, whether wholly or not, is not stated. There was blood on the walls of the room, on the curtains, washstand, basin, and drawers. The body was extended in bed, but Sellis's cravat was cut in several places. On the duke were two scalp wounds, his arm was wounded, his little finger nearly cut off, and there was bloody water in the basin in Sellis's room. Under these circumstances it would seem at least questionable whether the blood upon the walls, bed, and furniture was from the arteries of the servant or the master. These are all the cases of cut-throat

that I have met with in which the subject of sprinkling has been considered of sufficient importance to have been described in detail.

Taylor (p. 286) makes the following statement: "The sprinkling may be expected only when the wounded artery is small, or when the blood is effused at a distance. This is a fact which medical jurists should not overlook;" but he adds that it may be accidentally sprinkled from a vein. He says also (p. 277), "The hand and weapon cannot escape being marked with blood." He says also, "Sprinkling of blood, when it exists, may be evidence that it came from a living body."

BLOOD ON THE INSTRUMENT.

It is universally admitted by the authorities that in suicidal cut-throat there must be a certain amount of blood upon the instrument with which the wound was inflicted, and also upon the hand that carried it; but in regard to how much of blood there should be on each, and in what relation it should be found, they are almost entirely silent. In this instance it did not appear that the blood covered the razor blade, but that it was collected in rather narrow bands and in spots upon different portions of it, a band of moderate width being described near the edge of the instrument. It was urged by the prosecution that this was an inadequate show of blood upon the weapon. By the defense it was claimed that upon a polished instrument of any kind, and especially upon a razor that had been stropped on oiled or greasy leather, blood would dispose itself as water does upon such instruments, and thus cannot be made to cover the surface uniformly, but will collect in lines and drops, much as the blood was supposed to have collected upon the instrument in this case. This is a subject, however, concerning which surgeons have the means of forming more accurate opinions than physicians. The most definite statements we find on this topic are made by Taylor. Thus (p. 279) he says: "The blood on the instrument may be partly coagulated and not diffused as a mere film; this would render it probable that it had issued from a living person or animal, or from a recently dead body." Again, in the same page, he adds: "Particular attention should be paid to the manner in which the blood is diffused over the weapon. It is not unusual for a criminal to besmear with blood a knife or other weapon which has probably not been used." Thus it would seem probable, had this instrument not been used to make the wound, but obtained for the purpose of deception, as was believed by some of the witnesses for the prosecution, that the blood would not have been found collected irregularly on it, but it would, in Taylor's language, have been "besmeared" and very generally "diffused."

SUFFOCATION AND HÆMORRHAGE CONCURRING.

The fact that suffocation may occur in cut-throats seems to have attracted but little attention from medical jurists, yet the fact is

distinctly announced by several authorities, and is recognized in some of the reported cases. This may occur in either of two ways: by the retraction of the trachea, and its obstruction by the soft parts, or by the filling of the trachea with blood from the wound.

Briand and Chaudé (*Legal Medicine*, p. 309) state that if the trachea alone is cut, the inferior end retracts into the soft parts, the air no longer penetrates to the lungs, and death occurs from suffocation: if vessels are wounded at the same time, death is produced by suffocation and hæmorrhage.

Orfila (*Legal Medicine*, ii. 506) states, "when the trachea is completely divided, the inferior end is retracted and hidden in the neighboring parts, and the person dies of suffocation."

In the case already referred to under the head of sprinkling observed by Adelon, Dubois, Boyer and Rami (*Annales d'Hygiène*, xv. 394), these observers all recognize the fact that the blood will flow into the trachea and cause asphyxia. It is stated in their case that the trachea was retracted one inch, and that blood was found in the air tubes and assisted in destroying life. The lungs were much engorged. In a case recited by Devergie (*Legal Medicine*, ii. 117), homicide was committed by cutting the throat with a pair of scissors. The trachea was completely divided, as was the vertebral artery. Death was produced by hæmorrhage and asphyxia, blood being found in the bronchial tubes.

In the case of the great wound already referred to, reported by the same author (*Annales d'Hygiène*, 418), it is stated that "the blood was introduced into the right bronchus only, and had penetrated into the last ramification of the tube; nothing similar was observed in the left."

In Leuret's case (*Annales d'Hygiène*, v. 236) already cited, that of the officer who cut his throat with embroidery scissors, the trachea and right carotid artery were completely divided, and the left jugular vein and œsophagus partly, and blood had penetrated into all the air tubes.

In a case of homicidal cut-throat reported by Bayard (*Annales d'Hygiène*, xxxix. 433), the trachea and thyroid arteries were divided and the trachea and bronchi were filled with frothy blood, and the lungs were congested.

The fact that death may occur in this manner, and that asphyxia may play an important part in cut throats, through blood introduced in the manner here indicated, is recognized by Taylor (p. 296). He says, if in case of a wounded throat blood should flow into the trachea, it may cause death by asphyxia. In the case under consideration, the opinion has already been expressed that blood did in this manner enter into the breathing tubes and lungs more upon the right than upon the left side; and while it is admitted that this would be a sufficient cause for engorgement of the lungs, had such engorgement really existed, the statements already made show that the quantity of blood contained in these lungs was really less than is usually found in death from common causes;

at the same time it is altogether probable that these organs contained a larger quantity than if the person had died from wound of the carotid arteries without opening the windpipe.

ECCHYMOSIS OF THE TONGUE.

In nearly every instance that has been reported of suicide and homicide by wounds of the throat, the condition of the tongue has not been stated. It is more commonly referred to, and its condition described in the various forms of asphyxia. There appears to be abundant evidence of the fact that the tongue is frequently bitten when asphyxia is produced by suspension. In other forms of asphyxia, this accident does not appear to be of any particular significance or value. The opinion was expressed on the trial of this cause that biting and ecchymosis of the tongue might be the result of suffocation, but the witnesses for the prosecution failed to produce a single instance or a single professional opinion in favor of this theory, and it seems that it would be quite as natural to infer that the lesion in this case resulted from the spasmodic contraction of the muscles moving the lower jaw in the act of death as from any other cause. It is no objection to this view that both carotid arteries were cut, and that therefore the supply of blood to the tongue was in a great measure cut off, inasmuch as Christison and others have demonstrated that ecchymosis resembling that which occurs during life can be produced by violence on the dead body for about two hours after the heart has ceased to beat. Then, again, it is possible that this ecchymosis may have occurred many hours, or even two or three days before death.

Referring to the distinctive marks of hanging, Orfila (*Annales d'Hygiène*, xxvii. 143), after saying that the features, lips, and eyelids were swollen and livid, eyes red and prominent in most instances, refers to the tongue, stating that it is often but not always swollen, livid, and protruding, and adds: "If the tongue be bitten, bears marks of the teeth, and is more or less ecchymosed, this fact might give rise to the presumption of hanging."

Prof. Remer of Breslau (*Annales d'Hygiène*, iv. 178), recounting the signs of suffocation, makes the only statement that I have been able to discover which implies any relation between the biting of the tongue and suffocation. He says, regarding the tongue: "It is sometimes protruded, sometimes retracted, sometimes it is bitten in suffocation; this may be altogether unconnected with the mode of death. It is bitten or not in all kinds of death, and the fact that it is or is not bitten cannot be relied on as a sign of suffocation." This opinion, and the absence of any positive proof of the connection here sought to be established, would seem to be quite sufficient to exclude the fact from the affirmative evidence in a trial of this sort, and attach it alone to death by suspension. The condition most commonly referred to as belonging to asphyxia from violence is congestion, not ecchymosis, and this congestion is described as

having its principal seat at the root of the tongue, and not at the sides where this discoloration was noticed.

DIRECTION AND CHARACTER OF WOUND.

To my own mind there is no fact in this case which is so opposed to the theory of homicide, as the particular character of the wound by which death was produced. Penetrating on the left side directly inwards towards the centre of the neck, cutting the muscles and deep tissues to the depth of nearly three-quarters of an inch, as far posteriorly as the skin, then terminating upon the right sterno-cleido-mastoid muscle, or rather a little beyond it, cutting the skin, and half an inch farther than the muscle was cut; it is a wound which could not have been inflicted by a person standing on the left side of the body, and must have been made by the right hand, either of the woman herself, or of a person standing behind her, in such manner that his right hand might take the place of hers. The bed, as has been stated, was four feet four inches wide; the body of the woman occupied the left half, nearly or quite to the centre. There was no evidence that the bed had been moved, and no evidence of any other person but herself having been upon it. There was evidently not room for a person to take an attitude upon his knees at her right hand, and there inflict the wound, even had it been possible to have made such a cut in this attitude. Besides all this, a wound prolonged at its right extremity as this was, cannot be made by a person upon his knees, and so near to the body, facing it, as he must have been, had any part of this supposition been true.

The direction of the wound seems to be of some value in determining whether it was inflicted by herself or another person. The rule which applies to it seems to be received with many exceptions, and yet, when a particular direction is observed, it equally seems that the authorities attach importance to it. Thus Briand and Chaudé (p. 266) state that almost always in a suicide the instrument is directed from left to right, and from above downwards; while in assassination, on the contrary, the wounds are ordinarily made from right to left, and from below upwards, if the assassin is in front of his victim. Dieffenbach (above cited) speaks of the frequency with which in suicidal cut throat the wound is directed from left to right, and from above downwards, saying also that these wounds are ordinarily single.

Taylor (p. 266) refers to this point in the following language: "The direction of a wound has been considered by some to afford presumptive evidence sufficiently strong to guide a medical jurist in this inquiry. It has been remarked in most suicidal wounds which affect the throat, that the direction of the cut is commonly from left to right, either transversely or passing obliquely from above downwards. * * * * In left-handed persons, the direction, of course, would be precisely the reverse. Suicidal wounds

are, however, subject to such variation in extent and direction that it is scarcely possible to generalize with respect to them; nevertheless an attention to this point may sometimes be of real assistance to the inquirer." Again (p. 267) regarding the character of the wound he says: "Homicidal incisions, especially in the throat, are often prolonged below and behind the skin, forming the angles of a wound deeply into the soft parts; those which are suicidal rarely possess this character." The deceased and the accused are both right-handed.

POSITION OF THE BODY.

It will be remembered that little or no blood was described as having been seen below the upper border of the flannel dress that was next the skin on the chest, yet that there was a considerable spot of blood upon the sheet turned down upon the lower part of the body. The question of the position of this person when the wound was inflicted, whether seated or lying upon the bed, is one regarding which there is some doubt, and the question was raised whether it was possible to inflict this wound upon herself lying upon her back.

In my judgment this is the strongest point in the case for the prosecution, not because there is any difficulty in inflicting the wound, for there is none, as any one can convince himself by lying down either on the floor or on a feather bed (the bed in this case was of feathers), and making the necessary motions; but because it is a position rarely chosen, and seems to offer fewer facilities to this kind of suicide than the sitting attitude. The body and head were found inclined a little to the right, but there is not even a probability that this was the position in which the wound was inflicted. There were certainly some movements after the fatal wound was received. There was more blood on the right side of the body than on the left. This would only show that the deceased turned to this position while the bleeding was yet free. Taylor (p. 284) remarks that, "if the throat be cut while a person is lying down, it is obvious that the blood will be found on either side of the neck and not extending down the front of the body. Few suicides cut the throat while in a recumbent posture, and the course which the blood has taken may, therefore, be rendered subservient to the distinction of a homicidal from a suicidal wound." Had it been shown in this case, that the wound was really inflicted while the woman was lying down, in my appreciation, the other circumstances are so controlling as to place this case among the "few suicides *who* cut the throat while in a recumbent posture."

LOSS OF BLOOD.

At one stage of this trial, while it yet appeared that the quantity of blood lost was inconsiderable, it became of importance to ascertain what was the smallest loss that had proved fatal in the recorded cases.

In the case of Augustus Dautun (Beck, ii. 141), murder was committed, and the body afterwards cut to pieces. Dupuytren stated that the wounds in the chest were mortal. The thorax contained four pounds of blood.

Mr. Watson mentions a case (quoted by Taylor, 298), in which the internal mammary artery of the left side was divided by a stab in the chest. The man died on the ninth day, and four pounds of blood were found effused in that side.

Mr. Gutteridge (*Lancet*, Oct. 31, 1846, p. 478) reports the case of a woman, aged 36, who received a kick from her husband in the lower part of the abdomen while she was in a stooping position. Seen by Mr. Gutteridge in three-quarters of an hour, she had lost from three to four pounds of blood. She was sinking, and expired a few minutes after his arrival. The wound was entirely external, the left crus clitoris having been crushed so as to expose its cavernous structure.

In Beck (ii. 365) it is stated that a young man, sixteen years old, was stabbed with a nail rod and died in three minutes. The blood lost was one and a half pounds. The thoracic aorta was found wounded.

In the instance already cited, on the authority of Adelon, Dubois, Boyer, and Rami, it is reported that one pound of blood was lost. In this instance, however, it will be remembered there was congestion of the lungs, and blood in the air passages.

In Beck (ii. 348) it is reported on a Boston authority that a prisoner cut his throat, and died with the loss of a pint of blood. It is suggested, however, in this case, that air might have entered the jugular vein.

It would seem, then, that persons whose throats are fatally cut may die on the loss of a pound of blood, and it does not affect the question at issue that a circumstance other than the mere loss of blood aided to produce the death. The question is, What is the smallest loss of blood, which of itself alone, or complicated with other circumstances incident to such wound, may prove fatal in a cut throat? The question of how much blood the body naturally contains, though raised in this case, is in no manner essential to the issue.

Taylor (297), referring to some of these cases, says: "Females are more easily destroyed by hæmorrhage than males," and adds (p. 298), that according to Mr. Watson, the loss of five to eight pounds will ordinarily prove fatal, but that many persons will die from a much smaller loss; the rapidity of the flow exercising a great influence, as when a carotid is cut.

SUFFOCATION.

The circumstances which seemed to have been relied on as the proofs of suffocation, were: the alleged engorgement of the lungs, the pulmonary apoplexy, the bloody pleuritic effusion, the small quantity of blood supposed to have been discharged from the

wound, a certain amount of oozing from the cut vessels at the time the wound was dressed by the physician, and the blood which was discovered in the dressings at the first post-mortem examination.

These have been all remarked on except the last. Regarding the quantity of blood lost, while it has been shown that any quantity from a pint upwards may be with other circumstances attending upon cut throats sufficient to destroy life, the course of the evidence showed a much larger quantity than was at first supposed. With reference to the oozing of blood from the cut vessels, the witnesses for the prosecution were not all of the same opinion as to its significance, one of the most experienced stating that blood would continue to flow for a considerable time after death, but chiefly from the veins. As a matter of fact, however, it did not appear that the oozing after death was considerable, making allowance for a clot which was found in the wound and washed out at the time of the dressing.

Taylor (p. 299) makes the following statement regarding this circumstance: "It must not be supposed that all the blood met with around the wounded dead body was actually effused during life. As soon as the heart's action ceases, the arteries pour out no more, but the blood, so long as it is fluid, that is from four to eight or ten hours, and the warmth of the body is retained, continues to drain from the divided veins and smaller vessels. The quantity thus lost is not very considerable, unless the veins implicated are large."

The dressings of the wound, as observed at the first post-mortem examination, appear to have been: 1. A bandage extending around the neck. 2. A compress laid over the closed lips of the cut; and 3. Some cotton-batting that had been placed in the wound. These, it is stated, were filled with blood. The interpretation at first given was that it was drainage from the vessels left full from suffocation, but on further consideration it was admitted that all the blood found there, and more, might have come from the cranial cavity, expelled after the development of gases by decomposition. The circumstances which seemed to weigh as negatives upon the same question were: the entire emptiness of the heart in all its cavities, the empty state of the large internal blood-vessels, both arteries and veins, the entire absence of static congestion, and cadaveric lividity, as well as the unusual bloodlessness of every viscus of the body, the lungs, and probably the brain, excepted.

A circumstance already mentioned may weigh as evidence against the supposition that she was suffocated to death before her throat was cut, that is, the fact observed by one or more of the women (on laying out the body) that blood bubbles were noticed to rise out of the trachea. The trachea then was filled with frothy blood. This could hardly have been in the winter season, and within a few hours of the death, had there not been breathing after the throat was cut, and after the blood had entered the air-tubes.

Another circumstance of great significance, was the entire absence of any marks of violence upon the surface of the body, even the slightest, excepting always the fatal wound. The suffocation of infants is easy, and is doubtless often effected without any marks that would lead even to the suspicion of murder. The same may be true of persons much enfeebled by disease or insensible from intoxication or narcotic drugs, but the case is very different with adults and persons not enfeebled or poisoned. The examination of the records will probably fail to show a single case in which a mark or marks, considerable or slight, have not been left upon the body of such persons. It may be the cartilage of the nose has been crushed, the larynx may have been broken; there may be marks of the nails, or scratches upon the cheek; the upper lip may be ecchymosed, and even tumefied; and marks of the fingers may be found upon the neck or face, or ecchymosis, more or less considerable, resulting from a struggle; upon almost any part of the body evidences of bruises and ecchymosis; but that an adult of ordinary strength can be suffocated without leaving some mark, seems almost impossible. The instance claimed as that most nearly free from such external evidences was that of Margery Campbell, suffocated by Burke. "In her the features were rather more turgid than natural, the lips dark, conjunctivæ much injected, a little blood in the left cheek apparently from the nostrils; scarf-skin under the chin much roughened, and the skin brown and dry where denuded; the hyoid bone and thyroid cartilage farther apart than natural by the stretching of the interposed ligaments." Thus when Prof. Christison stated that these circumstances would not of themselves alone justify the opinion that this woman was suffocated, he did not by any means say that there were no marks that might lead to the suspicion of suffocation. It must be further noted that no scratches or marks of resistance of any kind were proved upon the person of the accused; and in this connection, it is proper to say that no stain of blood was found on his person, or clothing, or anything that was in habitual use by him, the razor only excepted.

The accused is slight in figure, exceeding in weight that of his wife only by twenty-five or thirty pounds. The disparity of strength could not have been very considerable; it therefore may be fairly questioned whether he possessed the physical strength to accomplish homicide in this way.

It is true Taylor remarks (p. 822), that "there are rarely any considerable marks of violence externally," but he further states under the head of "Homicidal Suffocation" (p. 827), "Hitherto the cases that have come before our Courts of Law have been those of infants and of the aged and infirm, and persons enfeebled by illness;" and again (upon the same page), "Homicide by suffocation would not be attempted on healthy persons, unless they were in a state of intoxication, and thereby rendered defenceless. It is certain that most individuals would have had it in their

power, unless greatly incapacitated by disease or intoxication, to offer such a degree of resistance as would leave upon their persons indubitable evidences of murderous violence." Again (p. 830), "Certain trials which took place some years since, clearly prove that individuals in a state of intoxication or infirmity, have been murdered by smothering, for the sake of the money derived from the sale of their dead bodies. It will be sufficient to mention the trials of Burke and McDougal in Edinburgh, and of Bishop and Williams in this metropolis (London). The victims were commonly destroyed by the murderer resting his whole weight upon the chest, so as to prevent the motions of the ribs, and, at the same time, forcibly compressing the nostrils and mouth by his hands to prevent the ingress of air." The case of Margery Campbell, just referred to, illustrates the kind of external evidences which this class of cases would be likely to furnish.

A curious instance illustrating the points here under consideration, is recited by Cazauvieilh (*Annales d'Hygiène*, xvi., p. 123). A man, twenty-nine years old, married at twenty-four, for three years gave no proof of conjugal affection, and then his wife only received once, in two or three years, some caresses; later, every spring, he experienced insomnolency, pain in the head and epigastrium, redness of the face and sadness. He then often spoke of death, and said, "He would hang himself, but would strike a good blow before that." When in bed with his wife, he would make very frequent attempts to strangle her, seizing her by the throat. If she disengaged one hand, he persisted in his attempt with the other. Not able to accomplish his design, he would tear her flesh. He renewed these efforts every spring for fifteen years. After a time there was less regularity in these excesses, but he became habitually irascible, unkind, and subject to exaltation of ideas.

These statements and circumstances lead to the conviction that strangulation, under the circumstances of this case, would not have been easily accomplished.

Finally, nothing of the subpleural ecchymosis, regarded by Tardieu & Bayard as characteristic of suffocation, was found in either post-mortem examination; nor was any bloody effusion found under the scalp or serous pericardium.

There are other points in this case that have been interesting to myself, which may perhaps be presented should the subject excite discussion, but I close the presentation of the case for the present, with the statement that this woman was habitually jealous of her husband to an extreme degree, and on two occasions, at least, had been insane.

Dr. Henschel asked if the blood-marks upon the face could not have been made by the left hand; if so, she could not have made them herself.

Dr. Clark stated that it would be a valuable point to determine whether it was the right or left hand that had made these marks, but from the testimony it could not be ascertained.

Dr. Griscom hoped that the points referred to by Dr. Clark in his recital would be thoroughly discussed, inasmuch as a case of cut throat had lately occurred, in which it was very questionable whether it was suicidal or homicidal in character. In consequence, however, of the lateness of the hour, he moved that such discussion be postponed until a future time.

The Academy then adjourned.

On the Animal Substances employed as Medicines by the Ancients. By G. J. Fisher, A.M., M.D., of Sing Sing, N. Y. (Read before the Westchester County Medical Society, June 11th, 1861.)

"Declare the past and present state of things."—*Dryden.*

Having on a number of occasions observed that various animal substances or products are, in this enlightened day, employed as popular and domestic remedies in the treatment of certain diseases and injuries, I have been led to investigate the history of their origin and use. An attempt has been made to ascertain how far their employment has resulted from accident or superstition, and to determine whether their continuance in use depended upon their possessing any of the medicinal properties which have been ascribed to them, or is in consequence of a blind devotion to authority, which has resulted in an established routine. Also, to determine, as far as my leisure and available means of research would afford, whether the profession or laity were most responsible for having introduced into the Materia Medica a list of animal products so disgusting, that their narration would produce a nausea in the least fastidious.

After a careful perusal of the works of Hippocrates, Celsus, Paulus Ægineta, MM. Pomet, Lemery, and Tournefort's History of Drugs, James' Medicinal Dictionary, (3 vols., folio, London, 1743,) the Dispensatories of Quincy, and other authors of over a century past, I was not a little surprised to find that most of the absurd animal remedies now in popular use can be traced to a remote antiquity; indeed, that the few which are still occasionally employed by the non-professional are the merest moiety of the formidable and sickening catalogue which swelled the list of simples of the ancient Materia Medica, large numbers of which were continued in the Dispensatories until within about a century of the present time.

The substances under consideration were doubtless first used in the treatment of disease by physicians. Their introduction into the Materia Medica was in consequence of preconceived hypotheses and false analogies, resulting from a want of knowledge of general and organic chemistry, and of the physiology of digestion

and nutrition. These false theories led them to *expect* certain results, which a blind devotion to their favorite views rendered them unable to discover were either useless or positively injurious. The supposed virtues of the article having been declared by one high in authority, it continued in use in obedience to this declaration, and hence by an established custom.

It was a favorite idea of the ancient physicians, that the use of the healthy parts or organs of animals, as food or medicine, would restore to health similar enfeebled or diseased tissues or organs in the human body.

Thus it was in the ancient and early history of medicine, and to no little extent is it now true, that the mass of medical men depend on the observations, experience and opinions of a few leading spirits, who are supposed to possess superior advantages or talent.

In Pomet's "Complete History of Drugs," dedicated, by permission, to Sir Hans Sloane, and published only a little more than a century ago, nearly one hundred quarto pages are devoted to an account of animal medicines. The following is a specimen of his therapeutical logic, to be found in the preface of the work:

"The different degrees of volatility that are in animal substances give them different virtues one from the other; so those which have so very volatile salts are usually reckoned cephalick and diaphoretick: as the *Viper*, *Human Skull*, *Hart's-horn*, *Goat's blood*, *Elk's-claw;* because the matter being heated in the *Viscera*, pushes forth their salts into the brain, and by the pores of the body. Those whose substance is less volatile have an aperitive virtue, such as is to be met withal in *Hog-lice* and *Craw-fish;* because the salts of these animals being heavier, are more inclinable to precipitate and open the urinary passages."

The Materia Medica was in harmony with the philosophy. As science advances, and the investigation of the properties and effects of medical agents is rigidly pursued, notwithstanding the continued discovery of new territory, and of new elements, both organic and inorganic, the tendency is to constantly diminish the number of substances worthy of a place in our Pharmacopœias.

The Materia Medica of Dioscorides contained an account of the history and virtues of nine hundred and fifty-eight simples; embracing ninety minerals, seven hundred plants, and one hundred and sixty-eight animal substances; which is nearly triple the number of officinal simples contained in any of the Dispensatories of the present day.

The last edition of the United States Pharmacopœia (1850) enumerates in the officinal list of the Materia Medica two hundred and forty-four articles, of which one hundred and ninety are vegetable, fifty-four mineral, and only sixteen animal substances. The secondary list, of the same edition, contains ninety-one articles, all of which are vegetable. The total number of articles in the officinal and secondary lists of the National Pharmacopœia is three hundred and thirty-five, of which two hundred and eighty are de-

rived from the vegetable, fifty-four from the mineral, and sixteen only from the animal kingdom.

The animal products are as follows: Lard, suet, neat's foot oil, cod-liver oil, spermaceti, isinglass, egg, castor, musk, Spanish-flies, potato-flies, cochineal, sponge, bone, animal charcoal, and oyster-shell. More than half of these are not supposed to possess any strictly medicinal properties, being used chiefly as pharmaceutical auxiliaries.

The following is a list of animal substances which I find particularly mentioned in the works above referred to. A large proportion of them were employed as medicines previous to the time of Hippocrates, and continued in use until within a century of the present time.

It will be seen that every class of the animal kingdom contributed to the ancient Materia Medica. I have attempted to arrange them, from all the above-cited sources, under the following appropriate heads—mammals, birds, reptiles, fishes, crustacens, insects, mollusks, and radiates.

1. Mammals.

Supplied the following drugs: (?)

Man—Mummy, man's skull, moss of a dead man's skull, dead man's hand. Royal touch, hair, nails, fat, marrow, heart, blood, milk, semen, ear-wax, sweat, saliva, urine, stone in the bladder, menstrual discharges, dung, secundines or after birth, and the membrane found around the head of the fœtus.

Cow—The bile and dung.

Bull—The horn and blood.

Ox—Fat, bile, dung, ankle and thigh bones.

Goat—Fat, liver, bile, blood, urine, dung, horn, and balls of hair found in the stomach.

Bezoar—Stone in the stomach, (Bezoar stone.)

Sheep—Wool, skin, brain, bile, dung.

Camel—Brain, rennet, urine.

Stag—Flesh, blood, sweat, tears, fat, marrow, brain, lungs, heart, bone of the stag's heart, *(os de corde cervi,)* balls of hair found in the stomach, horn, hoof, tooth, tail, testicle, and penis.

Roebuck—Liver, bile, rennet, dung.

Hart—The horn.

Antelope—The rennet.

Chamois—Blood, fat, liver, bile, dung, and the stone found in the stomach.

Elk—Hoof.

Horse—Blood, rennet, dung.

Ass—Liver, dung.

Mule—Urine.

Elephant—Teeth, bones, hoofs.

Rhinoceros—Horn.

Hippopotamus—Testicle, fat, ashes. "A ring made of the pizzle, and worn, is said to cure the cramp."—POMET.
Hog—Fat, bile, dung, ankle-bone.
Hedgehog—Flesh, skin.
Lion—Fat.
Cat—Dung. Blood of black cat's tail, (modern.)
Hyæna—Bile.
Bear—Skin, fat, blood, liver, bile.
Wolf—Liver, dung.
Fox—Whole animal, fat, lungs.
Dog—Fat, liver, dung.
Weasel—Entire animal, brain, stomach.
Bat—Blood.
Mouse—Head, dung.
Musk-rat—Testicle.
Beaver—Castor.
Hare—Ashes, hair, head, brain, eye, lungs, heart, blood, coagulum, liver, bile, kidneys, uterus, testicle, astragalus, rennet, dung.
Seal—Rennet.
Sea Cow—Bone or stone in the head.
Unicorn (?)—Horn.
Whale—Spermaceti, which, Pomet says, is the brain, and that "In the year 1688, there was one taken by a *Spanish* ship, that carried it to *St. Sebastian's*, from the Head of which were taken twenty-four barrels of Brain, and from the Body ninety-six barrels of Fat. They ought to be undeceived who believe that *Sperma Ceti* is anything else but the Brain of the *Cachalot;* and I can affirm this with Certainty."

2. BIRDS. *("Medicinal Birds.")*—POMET.

Domestic Fowl—Fat, blood, bile dung. The *Cock*, his brain; and the *Hen*, her stomach.
Duck, Tame Pigeon, Owl—Blood.
Peacock, Stark, Starling—Dung.
Hawk, Partridge—Bile.
Goose—Blood, fat, dung.
Wild Pigeon—Blood, stomach, dung.
Ring-Dove—Blood, dung.
Swallow—Entire bird, blood, brain, dung.
Cormorant—Liver, stomach.
Lark, Sparrow—Entire bird.
Kite—Head.
Ostrich—Flesh, skin of the stomach, fat.
Eagle—Flesh, bile, brain, dung, testicles, and "a stone that is found at the entrance of the hole where the bird builds her nest." (The eagle-stones were said to procure easy and safe labor, and to prevent miscarriage).
Vulture—Flesh, fat, brain, gall, dung.
Frigate or Man-of-War Bird—"The oil or fat is a sovereign

remedy for *sciatica* pains, and for all others proceeding from a cold cause."

Birds' Nests—Several kinds were in use, especially those of a species of swallow found in China. Pomet says, "The Chinese assign mighty virtues to this nest; as it nourishes extremely, being boiled in water with a fowl and ginger. They reckon it very good for curing pains at the stomach, and for restoring those that are in a languishing condition."

3. Reptiles.

Crocodile—Blood, dung.

Lizard—Entire animal, head, liver, blood, dung.

Chalcidic Lizard—Entire animal.

Sea-Skink— (a kind of lizard)—Entire animal, kidneys, belly, or stomach.

Swift—Entire animal.

Salamander—Entire animal.

Chamelion—Blood.

Frog—Entire animal, blood.

Toad—Entire animal, blood, oil, volatile salt, and stone in the head.

Turtle (Land)—Blood, oil.

Tortoise (Sea)—Volatile salt, oil, bile, blood.

Serpent—Skin.

Viper—Trunk separated from the skin, intestines, &c., fat, skin, gall, heart, liver, volatile salt of the entire animal.

Pomet says, "You ought to be careful that every bundel or parcel of vipers, which is usually a dozen, have the hearts and livers along with them, these being the most noble parts of the animal. Vipers ought to be heavy, large, long, well dried, and the freshest killed that can be got," &c. He also adds, "Both for external and internal uses there is scarcely found a more universal medicine than the volatile salts of vipers." "All other preparations of vipers, as powders, fixed salts, tinctures, decoctions, broths, jellies, wines, essences, troches, elixirs, extracts, &c., compared with the volatile salt, are nothing, for in that is to be found the sum of all that is in the viper."

4. Fishes.

Narwal, (sea-unicorn,) horn, oil.

Shark, bone of the head, spawn, and fossil teeth, which were worn in strings about the neck of children to aid in cutting their teeth, &c.

Anchovy, head; the whole fish was applied to the feet in fevers.

Herring, head. *Shad*, entire. *Tunny* or *Spanish Mackerel*, volatile salt. *Torpedo*, live animal, oil. *Triglar* or *Mullet*, entire. *Pastinaca marina*, whole fish.

Calionimus, bile. *Hippocampus*, entire, ashes.

Sea-Scorpion, oil, bile. *Fish* of several species, isinglass. *Alcyomia* consisted of the bones of fishes vomited by the kingfisher.

5. Crustaceans.

Crab, (sea,) entire, ashes, claws, eyes. (?)
Hermit Crab or *Soldier*, ashes, oil. *Squilla*, entire.

6. Insects and Worms.

Ants, volatile salt. *Grasshopper*. *Cicada* or *Harvest Fly*. *Cantharides*. *Cockroach*, entrails. *Melæ*. *Buprestis*. *Bees* or *Honey-Flies*, whole insect, honey, wax. *Dog-tick*. *Spider*, entire, web. *Caterpillar*. *Cochineal*. *Centipede*. *Scorpion*, ashes, oil. *Earth-Worms*, volatile salt.

Silk-worm, cocoon: the raw silk taken in powder, says Pomet, "makes the heart pleasant, the spirits brisk, and cleanses the blood."

Millepedes, (sow-bugs or hog-lice,) volatile salt, oil, and powder. The above cited author says, "Of millepedes there are many preparations, but the best way of taking them is certainly swallowing them alive; and the next to that, their expression made with wine."

7. Mollusks.

Harpa, *Nerita*, *Helix pomatia*, and other snails. *Solen*, *Oyster*, *Purpura*. *Buccium*, many species. *Limpet*, *Pearl-Shells*, several species. *Dentalium*, *Teredo*. *Strombus*, and other shells, furnished their opercula or lids. *Cuttle-fish*, entire, bone, ink-fluid. "The eggs or spawn of the cuttle-fish provoke urine and the terms." —*Pomet*.

It is impossible to identify many of the shells which were used in ancient medicine. Shells generally were regarded as "good sweeteners of the blood; also good against a canine apetite, a flux of the belly, and a hæmorrhage."

8. Radiates.

Echinus, (or sea-urchin, or sea-eggs,) *Coral*, *Sponge*. After such a list, who would not say—

> "Throw physic to the dogs, I'll none of it?"—*Shak.*

It is possible that by a more diligent and critical examination of ancient Pharmacopœias and Dispensatories, the list of animal drugs could have been farther extended. However, I have presented, at the lowest computation, a catalogue of two hundred and eighty-five articles, of which, 38 mammals supplied one hundred and thirty-five drugs, 21 birds forty seven, 13 reptiles thirty-four, 12 fishes

twenty-one, 3 crustaceans seven, 17 insects and worms twenty-three, 15 mollusks fifteen, 3 radiates three; total, 122 animals specified, furnished 285 simples of the materia medica employed by the ancients, most of which were continued in quite general use until within about a century of the present date!

To treat of the virtues which were attributed to these articles, and the countless preparations into which they entered, would require a large folio volume. The limit of the present essay will barely permit me briefly to allude, by way of illustration, to some of the medicinal properties and uses of the several parts of the stag, and of the human body, as recorded in the old Dispensatories.

The above table or catalogue of animal medicines will not be found in any work; it is the result of considerable research, extended over many volumes.

It was at first contemplated to classify the animal products, and treat of their virtues and application under distinct heads; space would not permit. We find in the above list 23 varieties of blood, 15 of bile, 4 of urine, 7 of brain, 13 of liver, 26 of fæces, &c., &c.; almost *ad infinitum*, certainly *ad nauseam*.

The examples selected will serve to illustrate the great variety of the products obtained from a single body, the false and superstitious notions which led to their employment, and the absurd ideas entertained in regard to the effects supposed to have been produced by them in the treatment of disease.

The Stag—This was regarded as one of the most important "medicinal animals" of the ancients. The head and horns have been used as the coat of arms or symbol of Pharmacy from time immemorial, and are yet quite generally to be seen over the door of the apothecaries in Belgium and other Continental countries.

Almost every portion of the stag was supposed to possess medical virtues, and was used as an antidote to poisons.

The *dried tears* of the stag, which are the sordes collected in the inner angle of the eye, resembling indurated ear-wax, in doses of three or four grains, were said to be good "against poisons, contagious diseases, difficult labors, and for expelling the dead fœtus. As an amulet, when tied to any part of the body, it was reputed to prove effectual against poisons."

The *tooth*, and the *hoof* (if taken from one of the right feet) possessed the same virtue.

The *stag's skin* was used against strangulations of the womb.

"A belt made of the skin of a stag, killed while in the act of copulating with the female, is found from experience to be possessed of singular virtues. When applied to the loins, it is said infallibly to promote the expulsion of the fœtus. The shavings of the skin taken off with pumice-stone, and triturated with vinegar, are said to be proper for anointing an erysipelas. A man clothed in a stag's skin is proof against poison."—*James' Med. Dic.*

The enmity between the stag and serpents was supposed to account for its anti-toxical properties.

The *brain* was used for pains in the hips and sides, and also for the cure of fractures; "but," says Dr. James (vide *Med. Dic.* 1743), "as we have great plenty of such mollifying medicines, the brain of this animal is not at present kept in the shops."

The *rennet* of the calf of the red deer was used for "stopping immoderate discharges of the menses, and resolving coagulated milk; also for the cure of epilepsy."

The *heart*, and the *bone of the stag's heart* (which was either from the valves or large vessels occasionally found ossified), were used to antidote poisons; to procure longevity; as a specific against abortion; for the cure of pleurisy and diseases of the heart. The usual dose was ʒss. in powder. It was also used as an amulet in violent hæmorrhages, and as a defense against the bites of venomous animals.

"If the testicles or pudenda of any animal be anointed with the *stag's tail*, calcined and triturated with wine, it quickens the desire of venery in that animal, and it produces the same effects in men; it is said that by its acrimony it irritates the fibres, and produces that degree of rigidity requisite for a due erection." Dr. James says, "The tail of this animal is not, however, kept in the shops."

The *marrow* of the bones of the stag was used as an application to the neck and mouth of the womb, for inflammation, induration, or ulceration. It was also esteemed as an antidote to poisons, and "to adorn the skin."

The *fat* or suet of this animal, according to Dioscorides, was used to soften tumors, for ulcers, dysentery, etc. Hoffman directed it to be laid on linen cloth, melted by the fire, and applied to the gums, and says, "it surprisingly alleviates toothaches, and extracts the worms which create the pain."

The *ankle-bone* of the stag was accounted a remedy for colic, dysentery, and stone in the bladder.

The *horns* were the most celebrated in medicine; from these the spirit of hartshorn or aqua ammonia was first distilled; it had many virtues ascribed to it.

The *blood*, when dried, was used in clysters to cure ulcerations of the intestines and inveterate fluxes. It was drank in wine to antidote poisons, and to cure the gout and pleurisy. Dose from half a scruple to a drachm.

The *lungs* of the stag, when smoked and dried, were considered a valuable medicine for cough and consumption. Pliny highly recommended them, but Dr. James remarks, "We can assign no other reason for this, than that stags, by their swiftness, demonstrate the goodness of their lungs."

The *elaphopila*, or hairs collected in the stomach of the stag, goat, and some other animals, were used to restrain hæmorrhages, and as a cure for vertigo. These effects were supposed to be in consequence of the animals climbing very steep rocks without being giddy.

"The *penis* of the stag was said to be of singular use in medi-

cine; but the stag must be killed in the time of coition, for by this means it is of the greatest efficacy in stimulating to venery, owing to the hot disposition of the animal. A drachm of it with a poached egg, and a small quantity of generous wine, proves a very powerful stimulus to venery; also as a powder rubbed on the testicles. If the stag is killed at any time except when in the act of copulation, its penis is an excellent remedy against dysentery and pleurisy; either in the form of a powder of 3ss. to 3j., or shaven down. It is also used in decoction, and prepared in a jelly, for the cure of colic and hysteria. Dioscorides tells us, that those who are bitten by vipers receive relief by the penis of the stag, triturated and drank with wine.

Man.—"That experience which physicians in different ages have had of the good effects which the parts or excrements of a dead or living human body have had in the healing its like in many diseases, have engaged them often rather to have recourse to it than to what might be had of beasts, and to give the proper descriptions and preparations of the parts of the human body."—POMET.

The human *mummy*, especially the Egyptian, was formerly used in medicine. It was retained in the Edinburgh and Quincy's Dispensatories till within a century of the present time. Dr. James says (1745), "The true Egyptian mummies are very seldom found in the shops, but are what ought to be used in medicine. The next in goodness to these is what is called the Arabian mummy, which is a thick liquor, of a dark color and aromatic smell, flowing out of the bodies, embalmed with myrrh, aloes, etc."

A spurious article of mummy was often sold in the shops. Pomet relates in detail the "rogueries of the Jews," from an eye witness, who, at Alexandria, was permitted to enter the house of a mummy manufacturer. "The Jew at last opened his magazine or storehouse, and showed him several bodies piled one upon another. Then, after a reflection of a quarter of an hour, he asked him what drugs he made use of, and what sort of bodies were fit for his service. The Jew answered him, that as to the dead, he took such bodies as he could get, whether they died of a common disease, or of some contagion. And as to the drugs, that they were nothing but a heap of several old drugs mixed together, which he applied to the bodies; which, after he had dried in an oven, he sent into Europe, and that he was amazed to see the *Christians* were lovers of such filthiness."

"Mummy is reckoned a good resolvent of coagulated blood, after falls or blows, and a good antiseptic; acting not only by its bituminous and balsamic parts, but also by the volatile salts of the carcass from which it is made. By dissolving it in spirit of wine, we easily obtain a tincture which contains its balsamic qualities. It is given in epilepsies, vertigoes, and palsies; the dose is two drachms, in powder or bolus. It also stops mortifications, heals wounds, and is an ingredient in many compositions."

Human fat, sweat, and *saliva* are all retained in the Dispensatory of Quincy. Pomet says, "As everybody knows, in Paris, the public executioner sells it to those that want it, so the druggists and apothecaries sell very little." "Man's grease is amollient, discussive, anodyne, and anti-paralytic. It is good against gout, &c."

Human ear-wax, says Paulus Ægineta, "cures fissures of the skin about the roots of the nails." Pliny assures us that the wax of the ears cures bites inflicted by men; also the bites of serpents and scorpions, if applied immediately to the part affected. It had many other uses. Internally half a drachm of human ear-wax was used as a specific for colic. It was applied to weak eyes, to boils, wounds, inflammations, tumors of the joints, &c. Pauli says, "Though this unusual and nauseous medicine were of so much worth and excellence, that nothing could be objected against it, yet there are many remedies already approved, and more pleasant in themselves, by which the intentions with which this medicine is prescribed may be equally well answered; for who doubts the salutary effects produced by spermaceti in the colic? Or who doubts that the balsam of Peru or Copaiva are excellent vulneraries? Not to mention other things exhibited, with greater applause, by more cleanly and skillful physicians."

Human Urine.—Quincy remarks, "Some have got a notion of this being good for the scurvy, and drink their own water for that end. Some commend it, boiled to the consistence of honey, for rheumatic pains, rubbing it into the parts affected; in which case it may do good, because it cannot but be very penetrating."*

"*Human dung,*" says Dr. James, (*Med. Dict.,*) "applied fresh, preserves wounds from inflammation, and at the same time conglutinates them; dried and rubbed on the parts, it is reported to give relief under the quinsy."

"*The human secundines,* or after-birth," says the same author, "is reported to be of some use in medicine. Thus it is ordered to be applied warm, as it comes from the uterus, to the face, in order to remove freckles. A water is also distilled from it for destroying spots and blemishes on the face. When dried and reduced to a powder, it is used internally against epilepsies; for accelerating the delivery of the fœtus, and allaying the pains of wounds. The dose of the powder is from ℈ss. to ℈ij."

The human skull has been highly celebrated for the medicinal virtues it is said to exert in the cure of epilepsy, apoplexy, dysentery, fevers, and arthritic disorders. As an amulet, it was worn to cure consumption, hæmorrhage, and incontinence of urine. Pomet says, "Some virtues are attributed to the skulls taken from gibbets, but in all probability the heats and colds of the seasons have dissipated the greater part. The skulls of criminals newly hanged, stripped of the fleshy membrane, and the brains taken out, being

* Hartman says (*Opera. fol., p.* 72,) he has often witnessed amongst the poor that difficult labor has been accelerated by a draught of the husband's urine!

well washed and dried, and separated with a saw from the lower part, are, or ought to be, what the druggists sell by the name of *Human Skull.*" Reiger cautions the physician who prescribes this medicine uncalcined, "to take care that the skull which is used did not belong to a person who was infected with the pox, which frequently attacks this part." Juncker remarks, "When exhibited with other ingredients it is sometimes found of some efficacy in epilepsies, but very seldom when given alone." The principal shop composition in which a skull is an ingredient, says Dr. James, (*Med. Dict.*,) is the Pulvis ad Guttetam.

Quincy very seriously remarks, (1749), "Man's skull, it is to be feared, has obtained a place in medicine more from a whimsical philosophy than on any other account; and therefore we find it appropriated to distempers of the head chiefly."

"*The moss of a dead man's skull,*" under the title of *Usnea Cranii Humani*, was formerly used in all diseases of the head. "The English druggists generally bring these heads from Ireland, where they frequently let the bodies of criminals hang on the gibbet till they fall to pieces. You may see in the druggists' shops of London some of these heads entirely covered with moss, and some that only have the moss growing on some parts; and we ought not to be surprised at the growth of this moss on the skulls of dead men unburied, since we daily see the hair of the head, beard, and some other parts of the human body grow after death, as long as there is any moisture left to supply nourishment to the part; and that the same thing happens to the nails is evident; but whether it will hold as to the teeth, as some pretend, I dare not venture to affirm."—(POMET.) Juncker, in his Therapeutic, affirms that Usnea renders the body so impenetrable, as not to be pierced with a musket-ball. Some writers declare that the moss gathered from the skulls of hanged persons is best; but Paracelsus asserts, that what is found on the skulls of persons broken on the wheel is no less valuable. It was thought that the vital and animal spirits of the deceased person are concentrated in this substance.

Manus Hominis Mortui.—The hand of a dead man was retained in the dispensatories as late as 1749. It was supposed to be of great efficacy in dispersing scrofulous tumors. The part was to be rubbed with the dead hand for some time; and report furnishes us with many instances of cures done hereby, "some of which," says Quincy, "may not improbably be true, both as the imagination in the patient contributes much to such efficacies, and because the sensations which stroking in that manner gives is somewhat surprising, and occasions a shuddering chilliness upon the part touched, which may, in many cases, put the fibres in such contractions as to loosen, shake off, and dislodge the obstructed matter; in which consists the cure. But such practice," he adds, "is too whimsical to be countenanced by any of worth in the profession of physic.

I will omit the remainder of the human products, which were employed by our professional fathers in the treatment of disease,

merely mentioning the *Manus Regalis*, or *Royal Touch*, which is idcluded in the officinal list of Quincy's Dispensatory, as a cure for scrofula. After expressing his opinion of its uselessness, he earnestly remarks: "However, perhaps the present Royal Family, whose merits have so justly placed them over us, will never condescend to make use of such a stratagem to awe their superstitious subjects, as may have been necessary to a weak or tyrannical governor."

Here ends my account of the odious animal materia medica, so anciently, and yet so recently employed, in the treatment of human maladies. How striking the contrast of the present neat and pleasant establishment of the apothecary, containing the refined and elegant preparations of modern pharmacy, with the loathsome shops of former days, on whose shelves were piled the moss-covered, grinning skulls of executed felons; the grim and ghastly mummies of ancient Egypt; bundles of dried and contorted vipers, etc., etc.! It must have been in a shop of this character that Romeo applied for a drachm of poison.

"I do remember an apothecary,—
* * * * *
"And in his needy shop a tortoise hung,
An alligator stuff'd, and other skins
Of ill-shaped fishes; and about his shelves
A beggarly account of empty boxes,
Green earthen pots, bladders and musty seeds,
Remnants of pack-thread, and old cakes of roses,
Were thinly scatter'd, to make up a show."

Strange as it may appear to any intelligent person, that such absurd and disgusting remedies should ever have been employed, even in the dark and ignorant period of the world's history; yet how much more remarkable is the fact that, in this enlightened age, with all the facilities for a free and universal diffusion of general and scientific knowledge, credulity and traditional superstition still prevail to so humiliating a degree, that many equally vile and irrational means are employed by quacks, and as domestic remedies, at the present moment!

I have known a medical man, who passed in the community as a respectable practitioner, to prescribe a living hen to be split open and applied to the abdomen, for an inflammation of the bowels. On another occasion, I knew the same man to order a calf to be quickly killed, its liver taken out, and applied, while warm and reeking with blood, to the abdomen of a young girl, who was within a few hours of death from peritonitis! In both cases the doctor explained the *modus operandi* as follows: The hen (or liver) is applied to *draw out* the inflammation; if it succeeds, the flesh will become dark, and speedily emit a putrescent odor! I have frequently known the common people, and, indeed, some otherwise very sensible persons, to give their children large doses of human urine and molasses for croup. A man in Sing Sing, who possesses common sense on common subjects, gave his child, which was about

one year old, a quantity of human fæces mixed with urine, as a remedy for spurious croup! I was then called, and found the unfortunate infant prostrated from excessive and persistent vomiting, occasioned by this vilest of vile doses, from the effects of which, and not from croup, the miserable babe died.

Only a few days since, a quack in Peekskill prescribed for a former patient of mine, who had cystic ovarian disease, a decoction or infusion of honey-bees, as a diuretic, to remove the dropsy! I have several times found ladies who were suffering with inflammation or abscess of the breast, with huge poultices of fresh cow-dung, which had been applied to the gland, at the urgent solicitation of some *friend*. I have also seen the fæces of the common hen applied to felons. Sheep or goat's dung, given in infusion, is not an unpopular remedy at the present time for the cure of measles. I have known several persons who have taken this "nanny-berry tea."

A *doctor-woman* in Sing Sing is in the habit of curing the shingles by that time-honored remedy, the blood of a black cat's tail.

While suffering under an attack of tonsillitis, I have been entreated to apply to the throat a living frog, which it was said would hasten suppuration and the bursting of the abscess. The frog is said to die in a very short time after it is applied; and numerous "modern instances" were adduced in proof of the efficacy of this ranine treatment. I have known swallows' nests, boiled in milk, to be used as a poultice for quinsy in several instances.

The royal touch is not employed in this country, for the simple reason that we have no kings or queens; but, as a substitute we have "the seventh son of a seventh son," who is generally believed to possess the supernatural power to disperse all scrofulous diseases. I have heard men and women, in whose veracity on all subjects but medicine I would have implicit confidence, declare that they had known and seen patients cured within a few weeks of obstinate and chronic scrofulous swellings and ulcers, by the laying on of hands of one of these miraculous individuals.

At the present time there is a stupendous quack in the city of New York, one whose fame is not unknown in other localities in this country, whose rooms are crowded by hundreds of patients, many, if not most, of whom are from among the opulent of that great metropolis. This founder of the Newtonian system of cure, who so rapidly accumulates silver and gold, and crutches and canes, from the *weak* and *lame* who seek his marvelous skill, removes their manifold ills in the twinkling of an eye, by the mere touch, and his sacrilegious invocations of Deity. Than this vile and impious wretch, the world has never produced a more successful charlatan.

He claimed to cure every ill that flesh is heir to—ovarian, uterine, and other tumors, &c., &c. I knew several intelligent persons who applied to him, who were assured that their tumors, &c., would speedily vanish.

From these and other facts which could be accumulated, it would

at first view appear that superstition and credulity are nearly as rife at the present as at any former period of time. It is not, however, so universal; it is perhaps restricted to a class, which I am sory to say is yet very large, in whom the organ of marvelousness is hypertrophied—a condition which manifests itself in seeking Spiritualism, Clairvoyance, Astrology, Homœopathy, and the kindred delusions of the day. When will the principles of sound education and the elements of good common sense so far prevail, that these ancient and modern absurdities will cease to delude so great a portion of the community?—*Amer. Med. Monthly.*

A Singular Case of Hemiopia, with remarks. By CHARLES A. LEE, A.M., M.D., Prof. of Materia Medica.

Two years ago last July Miss T——, æt. 16, attending a boarding-school, was instantaneously attacked with hemiopia while reading an essay before the school. Her face was observed to flush very much while reading, and the accident was at once discovered. I was requested to see her not long afterwards, and found her laboring under partial blindness of the right eye, obscuring one half the field of vision. Closing the left eye and looking directly forward, she could see just one half of any object, if presented immediately before the eye, viz. *the upper; the lower half being totally invisible.* The treatment, which was generally alterative, locally depletant, and revulsive, and continued for several weeks, produced no change whatever, and the vision is now as imperfect as the day the accident happened.

I believe that temporary hemiopia, affecting the right or left half of all objects, is not very unusual, as I have myself been thus affected at times, and known many others also similarly attacked. Sometimes it has been confined to one eye, but quite as often attacks both. But in all these cases the affection has been but temporary, passing off in the course of a few minutes, or hours, at furthest. The celebrated Dr. Wollaston was repeatedly attacked with hemiopia, as related by himself, in the Philosophical Transactions for 1824 (part i. p. 229), and he made the disease the basis of a theory regarding the "*Semi-decussation of the Optic Nerves*," published in the same paper. As his case is an extremely interesting one, especially in connection with the morbid appearances of his brain, as disclosed at the autopsy (*Lond. Med. Gazette*, vol. iii. p. 293: Lond. 1829), no apology will be needed for quoting it at length, as well as two other cases which he has related:—

"It is now more than twenty years," says he, "since I was first attacked with the peculiar state of vision to which I allude, in consequence of violent exercise I had taken for two or three hours before. I suddenly found that I could see but half the face of a man whom I met; and it was the same with respect to every object

I looked at. In attempting to read the name JOHNSON over the door, I saw only SON; the commencement of the name being wholly obliterated to my view. In this instance the loss of sight was towards my left, and was the same whether I looked with the right eye or the left. This blindness was not so complete as to amount to absolute blackness, but was a shaded darkness without definite outline. The complaint was of short duration, and in about a quarter of an hour might be said to be wholly gone, having receded with a gradual motion from the centre of vision obliquely upwards towards the left. Since this defect arose from overfatigue, a cause common to many other affections, I saw no reason to apprehend any return of it, and it passed away without any need of remedy, without any further explanation, and without my drawing any useful inference from it. It is now about fifteen months since a similar affection occurred again to myself, without my being able to assign any cause whatever, or to connect it with any previous or subsequent indisposition. The blindness was first observed, as before, in looking at the face of a person I met, whose *left eye* was to my sight obliterated. My blindness was in this instance the reverse of the former, being to *my right*, instead of the left, of the spot to which my eyes were directed; so that I have no reason to suppose it in any manner connected with the former affection. The new *punctum cæcum* was situated alike in both eyes, and an angle of about three degrees from the centre; for when any object was viewed at the distance of about five yards, the point not seen was about ten inches distant from the point actually looked at. On this occasion the affection, after having lasted with little alteration for about twenty minutes, was removed suddenly and entirely by the excitement of agreeable news respecting the safe arrival of a friend from a very hazardous enterprise."

We are not informed whether Dr. W. ever had any subsequent attacks of hemiopia, but he died about four years after this account was written, and it is stated that the *right optic thalamus* was of an unusually large size, and that on making a section of it, with the exception of a layer of medullary substance on its upper part, little or no vestige of its natural substance was perceptible. It had been converted into a tumor as large as a middle-sized hen's egg, of a grayish color towards the circumference, and harder than the brain itself, samewhat of a carious consistence, but in the centre of a brown color, soft, and in a half-dissolved state. This diseased structure was not confined to the thalamus, but extended to the neighboring portion of the corpus striatum. The right optic nerve, where it passes on the outside of the thalamus, was of a brown color, more expanded, and softer than natural. (See *Loc. Cit.*, p. 293.) Whether any connection existed between this pathological condition of the brain and the previous affection of the sight, cannot be determined with any certainty, although it is certain that "morbid alterations in the substance of the brain sometimes produce periodic diseases; and that certain additional causes of

XUM

excitement operating upon an unsound brain will cause one or other of the functions of that organ to be for a time impeded, till the new cause ceases to operate, when the individual immediately returns to his former state of apparent health."

Dr. Wollaston has related, in connection with his own case, two other instances of the affection in persons of his acquaintance, which are perhaps worth quoting. In one, a gentleman, after suffering severe pain in his head for some days, about the left temple, and towards the back of the left eye, his vision became considerably impaired, attended with other symptoms, indicating a slight compression on the brain. Dr. W. saw him at the end of three or four weeks, and found him laboring under hemiopia, which became permanent. In this case the blindness was in reference to objects situated to the right of the centre of view. "Fortunately," says Dr. W., "the field of his vision is sufficient for writing perfectly. He sees what he writes, and the pen with which he writes, but not the hand that moves the pen. This affection is the same in both eyes, and consists in an insensibility of the retina on the left side of each eye. *It seems most probable that some effusion took place at the time of the original pain on that side of the head*, and has left a permanent compression on the left thalamus.* This partial blindness has now lasted so long without sensible amendment as to make it very doubtful when my friend may recover the complete perception of objects on that side of him.

In another case, related by Dr. W., a person had been habitually subject to the affection for sixteen or seventeen years, *whenever his stomach was in any considerable degree deranged.* Here the blindness was invariably to the *right* of the centre of vision, affecting both eyes alike, and lasting about a quarter of an hour after eating, when laboring under indigestion, and then subsiding without leaving any permanent imperfection of sight. The pathology of this affection, as suggested by Wollaston, is highly rational and ingenious, if not wholly sound in detail. He assumes that, as the corresponding points of the two eyes sympathize in disease, their sympathy must arise from structure, and not from a "mere habit of feeling together;" that two corresponding points must be supplied with a pair of filaments from the same nerve, and the seat of a disease in which similar parts of both eyes are affected must be considered as situated at a distance from the eyes, at some place in the course of the nerves where these filaments are still united. Hence, he inferred that the cord, which is called *optic nerve*, must be regarded as consisting of two portions, one of which comes from the right, and the other from the left thalamus: decussation thus taking place only between the adjacent halves of the two nerves: that portion proceeding from the right thalamus to the right side

* Dr. Wallaston was under the impression that the optic nerves took their rise from the *thalami nervorum opticorum;* whereas it is now well known that they have their origin in the *corpora quadrigemina*, the optic lobes, tubercles, or ganglia.

of the right eye, passing to its destination without interference; and in a similar manner the left thalamus supplying the left side of the left eye with one part of its fibres, while the remaining halves of both nerves, in passing over to the eyes of the opposite sides, intersect each other, either with or without intermixture of their fibres. It follows that an injury to the *left* thalamus would occasion blindness to all objects situated to our *right*, owing to insensibility of the left half of the retina of both eyes, and *vice versâ*. But how is it, when, as in the case I have given, the *upper* or *lower half* of the field of vision is obscured, causing horizontal hemiopia? Is there any evidence that the two portions, of which each optic nerve may be regarded as consisting, remain distinct after they form the retina? Do not pathological facts, and anatomical and physiological experiments, show that diseases and injuries affecting one side of the brain produce amaurosis only in the opposite eye, instead of hemiopia in both eyes? Mackenzie has called attention to the fact that, as the optic nerves pass through the sclerotica and choroid, considerably nearer the middle line of the body than the centre of the globe of each eye, the two optic axes, which, if any two points deserve to be considered as such, are surely corresponding points, will not be formed by filaments from the same nerve, but from opposite nerves; and he thinks it more probable that the two portions, of which each optic nerve consists, mingle in the fibres, and then expand into the retina, so that the membrane in each eye should be regarded as a plexus, every point of which contains fibres derived from each side of the brain.

The best and most recent anatomical authorities represent the optic nerves as decussating with each other in such a manner as to form a connection between the two opposite sides, as well as between each tubercle and retina of the same side. This is beautifully illustrated by a plate in Dalton's Physiology, where from each optic tubercle three different bundles or tracts of nervous fibres are seen given off; one set passing across transversely at the point of decussation, and turning backwards, terminates in the tubercle of the opposite side; another set, crossing diagonally, continues onward to the opposite eyeball; while a third passes directly forward to the eyeball of the same side; a fourth set of fibres, still, passes across, in point of the decussation, from the retina of one side to that of the opposite side. By this arrangement, then, we have the two retinæ, as well as the two optic tubercles, connected with each other by commissural fibres; while each tubercle is, at the same time, connected both with its own retina and with that of the opposite side. It is doubtless owing to these connections, and this arrangement, that when, in the human subject, the eyes are directed in their proper axes, the two retinæ, as well as the two optic tubercles, act as a single organ, and that vision is single, though there are images upon the retinæ: double vision only occurring when the eyeballs are turned out of

XUM

their proper direction, so that the parallelism of their axes is lost, and the image no longer falls on corresponding parts of the two retinæ; or in other words, the fibres which proceed from the optic ganglia to the retinæ, constituting the proper optic nerves, being composed of an external and an internal tract—the *external* on each side pass directly onwards to the eye of that *side*, whilst the *internal* crosses over to the eye of the *opposite* side; the distribution of the two sets of fibres in the retina of each eye respectively being such, that the fibres from either optic ganglion will be distributed to its own *side of both eyes*—the right optic ganglion being thus exclusively connected with the outer part of the retina of the right eye, and with the inner part of the retina of the left eye, and the left optic ganglion being, in like manner, connected exclusively with the outer side of the left retina, and with the inner side of the right. Of course, as either side of the eye receives the images of objects which are on the other side of its axis, it follows that in the human subject, as well as some of the lower animals, each ganglion receives the sensations of objects situated on the opposite sides of the body. It has been suggested that the purpose of this decussation may be, to bring the visual impressions, which are so important in directing the movements of the body, into proper harmony with the motor apparatus; so that, the decussation of the motor fibres in the pyramids being accompanied by a decussation of the optic nerves, the same effect is produced as if neither decussated, as is the case with invertebrated animals in general.* In fishes, for example, as is well known, the optic nerves cross each other at the base of the brain, without any intermixture of their fibres; that from the right optic tubercle passing to the left eye, and that from the left optic tubercle passing to the right eye; the two nervous cords being totally distinct from each other throughout their entire length, being only connected at the point of crossing, by intervening areolar tissue. Of course, impressions made on the right eye must be perceived on the left side of the brain, while those which enter the left eye are conveyed to the right side of the brain. In birds, also, although the optic nerves are here united, and appa-

* Carpenter has remarked (*Princ. of Hum. Phys.*, p. 717) that the singleness of the impression resulting from the formation of two pictures upon our retinæ is not attributable to the anatomical arrangements above pointed out; but that their combination is a *mental process*, and "the fusion of two *dissimilar* pictures is necessary to enable us to exercise one of the highest attributes of the visual sense, the perception of *projection*." If this be so, why is *perfect vision* possible with one eye; and why, when, by the pressure of the finger, or otherwise, we compel the image to fall in one of the eyes upon another, and, therefore, not symmetrical point, the object at once becomes double? The fact is, that each point of the outer portion of the retina of the right eye has its point of symmetry in an inner portion of the left, and when from any object rays fall on those symmetrical points that object will be seen single; if not, double. This exchange of symmetry, of course, concerns only the *lateral divisions*, for the upper portion of one eye corresponds with the upper portion of the other, and the lower with the lower.

rently soldered together at their point of crossing, yet the decussation of their fibres is nevertheless complete; the nervous filaments coming from the left side passing altogether over to the right, and those coming from the right side passing over to the left. Accordingly, if one of the optic tubercles be destroyed in a bird, complete blindness is at once produced in the eye of the opposite side; but vision remains unimpaired in the eye of the same side with the injury. The true explanation of the phenomena of hemiopia must, then, be found in the anatomical arrangement of the fibres entering into the structure of the optic nerves. Mackenzie very truly states, that if a tumor or excrescence were to press on the optic nerves immediately anteriorly to their union, the effect would be, according to the hypothesis of semi-decussation, to paralyze the inner half only of each retina. If, however, pressure were made on that portion of either optic tubercle whence those fibres originate which pass across transversely at the point of decussation, and turning backwards terminate in the tubercle of the opposite side; or if the effusion be located at that point whence the fibres originate, which, crossing diagonally, pass onward to the opposite eyeball; or at that part whence the fibres proceed directly forward to the eyeball of the same side, without any decussation whatever; or, as in the case already supposed, where pressure is made on those fibres which pass directly across in front of the decussation, from the retina of one eye to that of the opposite side, causing in this case paralysis of the inner half only of each retina; in each of the above pathological conditions supposed the phenomena will be varied according to the precise point on which the pressure is made. It would seem that the same effects would follow whichever tubercle, the right or left, was the seat of the pressure; but whether the right or left side of the retina, its upper or its lower portion, be paralyzed, must depend, of course, on the particular portion of the optic tubercle on which the pressure is exerted, or which becomes the seat of disease. When the hemiopia is seated in one eye only, we infer that that portion of the tubercle is affected, or the seat of pressure, whence those nervous fibres originate, which do not decussate, but pass directly forward to the eyeball of the same side. We thus, I think, have an anatomical explanation of the phenomena of hemiopia, which is entirely rational, and consistent with all that is yet known of cerebral pathology. In the case I have detailed it is undoubtedly very remarkable that the slight cerebral excitement, manifested by a temporary blush on the cheeks, should have resulted in a partial horizontal blindness of one eye, and that it should have continued unchanged for more than two years: showing either that absorption of the effused blood has not taken place, or, if it has, that the function of a portion of the nervous fibres has been lost by disuse, or disorganization, the result of long continued pressure: and those cases of functional or sympathetic hemiopia caused by indigestion, and lasting but a short time, are equally curious and remarkable. In these cases, so far as we have

observed, the affection involves both eyes, but where it is owing to a permanent organic cause, as a clot, or pressure from effusion, it may be confined to one eye. The organic cause may be seated either, first, in the *retina itself*, which is liable to inflammation and congestion and their usual results, its functions being subject also to a partial or complete extinction, without itself evincing any change of structure, its sensibility alone being impaired or abolished; or second, in the *optic ganglia*, whence the optic nerves originate; or third, in the *optic nerves* themselves, in some part of their course, from the anterior part of the quadrigeminal bodies, along the thalami and the tubera cinera, to the retinal expansion. The functional derangement of vision from worms in indigestion, etc., may be accounted for, from the connection of the retina with the par vagum, sympathetic, and other nerves. For example, branches from the great sympathetic may be traced upwards, from the first cervical ganglion, to the ganglion lodged in the cavernous sinus; whence branches proceed and communicate with the third, the first division of the fifth and sixth pairs of nerves; while branches pass from the cavernous ganglion directly to the lenticular ganglion; besides, as the internal carotid artery passes into the cranium, it is surrounded by the sympathetic nerves, which accompany all its ramifications, including the ophthalmic artery, and its branches to the choroid, iris, and retina; branches also of nerves proceed from the lenticular ganglion to the iris, giving off minute twigs in their course to the retina. Morbid states, then, of these nerves, or irritation of their expanded extremities on the gastro-intestinal membrane, may be reflected upon the optic nerves, or the retina, or iris, and derangement of vision follows.

After what has been stated it is unnecessary to speak of the predisposing or exciting causes of hemiopia, whether functional or organic, as they are sufficiently obvious. Nor need the principles of treatment be dwelt upon, as they are equally evident.—*Amer. Med. Times.*

PEEKSKILL, 1862.

New York Pathological Society—Influence of Chronic Pleurisy on the development of Phthisis; Pneumo-hydro-thorax; Pericarditis.

Dr. Austin Flint presented a specimen of a heart, and remarked upon it as follows:—The patient from whom the specimen was removed I saw for the first time in Bellevue Hospital, the early part of September last. He gave then this history:—He had had cough, with some expectoration, for ten months, and during this time had had one or more attacks of hemoptysis. He, however, continued his work as a laborer, and while engaged in rolling a barrel, some three or four weeks before his entrance, he felt sud-

denly an acute pain in the left side, as if something had given way. His pain continued; there was dyspnœa on attempting to exercise, and he took to his bed for three days, then arose, and was able, with some difficulty in his breathing, to get about. When I saw him in September, he did not present a particularly morbid aspect, and was able to walk about with much difficulty. The left side of the chest was found to be dilated, and comparatively motionless on respiration, giving at its superior portion some tympanitic resonance, with flatness at the base. The heart was crowded to the right side, and succussion could be easily produced, making it evident that pneumo-hydro-thorax existed. On resuming my attendance, Dec. 1, not having seen the patient during October and November, I found him up, and able to take considerable exercise without much inconvenience. The left side of the chest was, however, still more dilated, yielding absolute flatness on percussion, with complete silence of all auscultatory signs. He remained in this condition for some time, but after a while the fluid began to accumulate, causing great distress in breathing. He was then very anxious to have the chest opened, but I objected to the operation, thinking that perhaps the removal of the liquid might lead to perforation of the lung, and renewal of the pleurisy. However, his sufferings increasing upon him so rapidly as to render his life in danger from suffocation, I consented to have the fluid drawn off. This was done by Dr. Sayre, in presence of the class. A free incision was made at the lateral and lower portion of the chest, giving exit to a large quantity of turbid liquid, which had a slightly fetid odor. The patient was very much relieved thereby, and for some time afterwards expressed himself as feeling very comfortable. On examination, however, the usual signs of perforation of the left lung were very evident; there being present amphoric voice, amphoric respiration, metallic tinkling, and tympanitic resonance. The opening, contrary to our intentions, closed, but soon after opened again, when sufficient fluid had accumulated. A constant discharge of fluid, similar in character to that already described, was kept up for two or three weeks, at the end of which time death took place by exhaustion.

I was not present at the autopsy, but perforation of the lung was shown to exist by inflation through the trachea with a bellows; air freely bubbled up through the liquid, in the chest. The left lung was very much compressed, and the right lung presented some emphysematous lobules at its upper portion, and also some evidences of tuberculous deposit.

It was ascertained that the patient had had pericarditis. There was universal adhesion of the pericardial surface, though not very firm, except at one point, where there was quite an organized band. On the side where pneumo-hydro-thorax existed, at the summit of the lung, were a few old, small characteristic tuberculous excavations. In removing the lung a portion of the tissue of the organ in this situation was so fast adhered to the chest that it was left

behind. Throughout all the other portions of the lung, there were no evidences of tubercle.

The points of interest in the case I suppose to be these:—In the first place, the occurrence of pneumo-hydro-thorax with pericarditis in a patient, who after a short time was able to take exercise without suffering. I think this is rare, although I have met with two or three cases somewhat similar. Another point in the case is the evident arrest of the tuberculous disease. There had evidently been, for some time before the death of the patient, and probably during the time he was affected with pneumo-hydro-thorax, no fresh deposit of tubercle. The tubercle that had been deposited at the apex had undergone its changes in the formation of cavities when the disease had undergone arrest. That fact is interesting to me in connection with the impressions I have received, as the result of clinical observations, that the occurrence of chronic pleurisy in the course of tuberculous disease leads to the retardation of the latter affection.

Dr. Clark remarked, with reference to the last statement of Dr. Flint, that some fifteen or twenty years ago it was proposed to puncture the chest in cases of tuberculous disease of the lungs, and take the consequences in the hope of a cure by compression. He did not think that the treatment gained currency, although the practice was no doubt founded upon the same general observations as referred to by Dr. Flint. Dr. Clark had frequently noticed that the development of tuberculosis was retarded by compression of the lung.

VEGETATION ON MITRAL VALVE, HYPERTROPHY OF HEART, ETC.

Dr. Flint presented next a heart, taken from a female, æt. 35, who recently died in Bellevue Hospital. She entered the Institution on the 10th of December, had had rheumatism nine years before, had suffered many years from want of breath on exercise, and had finally been affected with general dropsy a few weeks before her admission. When I saw this patient, continued Dr. F., she had anasarca with liquid effusion in the cavities, was suffering with dyspnœa, presented lividity of the prolabia and face. On examning the chest there was an extremelyloud systolic murmur heard with its maximum of intensity at the apex, and propagated to the left as far as the spinal column, and even to the right of it. This was the only murmer that could be discovered. The heart was evidently somewhat enlarged, the apex beating in the sixth intercostal space on a vertical line with the nipple. The aortic first sound was feeble, the aortic second being quite intense. This patient failed rapidly, the dyspnœa became more and more urgent, the anasarca more extreme, and she died with that slow lingering death from apnœa. The urine, which was examined while the patient was under my care, presented no evidences of albumen, although it was said to have contained it at a previous time.

The heart when removed weighed twelve and a half ounces. The right ventricle is dilated and hypertrophied, the walls being three-eights of an inch in thickness. Both the auricles are largely dilated. The walls of the left ventricle are not increased in thickness, and its cavity is not much, if any, dilated. This condition is somewhat unusual with disease of the heart, inducing general dropsy and death. There was free regurgitation through the mitral orifice, and the enlargement of the other portions of the heart, viz: the two auricles and the right ventricle, is perfectly consistent with that condition of things. The right cavities were filled simply with dark coagula, a fact which shows that the mere accumulation of blood in these cavities, the cause of death being paralysis, does not necessarily lead to the formation of ante-mortem clots. These latter in all probability depend as much upon the condition of the blood at the time as its mere stagnation.

The interesting point connected with this specimen is, not the contraction of the mitral orifice, which is common enough, but the presence of two vegetations of considerable size, one as large as a bean, the other somewhat smaller. The larger one is attached to the papillary muscle of the inferior curtain by what appears to be a small pedicle, which is a fractured extremity of one of the tendinous cords. The vegetation is produced, as I suppose, by the accretion of fibrine upon it. The other concretion is upon another tendinous cord which has not been fractured. These vegetations were so situated as to be pushed backwards and forwards by the direct and regurgitative currents, and being thus moved were very liable to be detached, and to have produced an embolus. It is easy to see if the vegetation had been found plugging up any of the arteries after death that the place of its original development could have been easily determined—especially if a portion of the tendinous cord were carried with it.

Dr. Clark asked if any of the tendinous cords were ulcerated, as it was rare that rupture occurred without such a pathological process pre-existing.

Dr. Flint had found no evidences of ulceration of the parts alluded to.

BRIGHT'S DISEASE SUCCEEDING DIABETES.

Dr. Alonzo Clark next exhibited a specimen of Bright's disease, and recited the following history of the case: —

A child ten years of age, was attacked with pneumonia a little more than a year ago. The disease ran its usual course, and the recovery was apparently complete. Two months after this it was noticed that the quantity of urine passed was very much greater than usual. The family physician, Dr. Linsley, had his attention called to this point, and very soon after asked me to see the girl with him. We examined her, and found that the quantity of urine passed during the day amounted to a gallon. Its specific gravity was 1036, and the quantity of sugar which it contained was very

considerable; in other words, it was a case of diabetes. It went on as diabetes for several months, the quantity of water being diminished very much, and the quantity of sugar in it decreased while she was taking the alkalies pretty freely; and subsequently to that Champlin's cakes were recommended, this being while she was in the country during the summer. On the return to town in the autumn the mother had an objection to restraining the child to diet, and thinking it was hardly worth while to administer medicine, as it was an incurable disease, very little medicine was given. The physician at this time saw the child but little. During the latter part of its life she was allowed to eat cakes, candy, indeed almost everything. She retained her flesh very well. About a fortnight before her death it was noticed that she had a fever, and that the quantity of urine was diminished, and its color changed. I suppose that it had lost the faint straw color that diabetic urine usually has. The mother stated that it was less watery, and that it bore a bead a long time after it had been passed. On a Saturday night the mother noticed that this fever was more intense than it had been at any time previously, the child being very restless. Dr. Linsley early in the morning following found the pulse 140, with a great deal of restlessness, and in the course of the day invited me to see the girl; an interval of eight or nine months had then elapsed since my last visit. We found the pulse still up to the high figure referred to, and the face, which was a few days before rosy, was then pale, the nervous restlessness had not abated, and she had severe pain in the left side and chest, giving rise to the suspicion of pleurisy, which, however, did not exist. There was also a great deal of pain in the stomach, a little vomiting and disposition to stupor, with a contracted condition of the pupils. The thought struck us that there must have been some change in the phase of the principal disease. There was no pneumonia present, though there was discovered some dulness at the base of the left lung with crepitation. A small amount of œdema about the feet and legs was also noticeable. At our next visit during the afternoon of Sunday, the crepitation and dulness had all gone, yet pain still remained. The same mental condition continued, though there was less moaning. The respiration had become very remarkably embarrassed by laryngeal spasm. In the meantime I obtained the urine, which had become about one third less than it had been during the diabetic stage of the disease. It was found in addition to the sugar it contained, heavily charged with albumen, granular casts being also in abundance. The specific gravity was 1020. Death occurred on Monday night, having been comatose only about three hours.

A post-mortem examination was granted by the parents, and all the organs of the body liable to be in any manner connected with the disease were inspected, with the exception of the brain and spinal cord. The kidneys were about the size of those organs in the adult, and were of a pale hue. Microscopical examination proved the existence of fatty degeneration; none of the urinifer-

ous tubes contained healthy epithelium, and most of the cells were loaded with fat. The intertubular tissue was in a state of granular and fatty degeneration; in a word, Bright's kidney existed, though not far advanced.

We were interested in the examination of the other organs. Not a tuberculous grain could be found in one lung, and none could be felt in the other. The post-mortem examination also showed that the dulness and crepitation that were noticed at the base of the left lung at the first visit on Sunday had left no mark; no pneumonia; no pleurisy; no abscess. The pain was doubtless due to a hyperæsthesia over the whole chest.

The liver we examined, and I reserved a small piece of it for microscopic inspection. There were two bands upon the surface, which gave unmistakable signs of fatty degeneration, but taking a portion which exhibited no particular marks, and examining it microscopically, I found it in a condition very similar to that described in the kidney. The cells were almost all of them fatty, and there was a certain amount of granular exudation in the tissues; whether this condition belonged to the diabetes or not I am unable to say. The liver was large for a child of her age.

The heart was about natural in size, and I was interested to know in connection with this disposition to fatty disease in the kidneys and liver that there was some atheroma in the arteries, and that in the mitral valves were two spots of considerable size in which the atheromatous deposit was quite marked. These are the prominent features in a case which has interested me as the first one in which I have known of diabetes being converted into, or replaced by Bright's disease.

I have no doubt that the child died of uræmia, but there was still sugar in the urine and the quantity of that secretion was large.

Dr. Bibbins remarked that, being a friend to the family he had seen the child but a few days before death, and was much surprised, considering the beautiful color of the cheek, to learn that it had Bright's disease.

VALUE OF BRONZE SKIN IN DISEASE OF SUPRA-RENAL CAPSULES.

Dr. Clark presented a pair of kidneys, with supra-renal capsules attached, which had been sent him by Dr. Hogan of the New York Hospital. He had no detailed account of the case to give, it was sufficient to refer to a single point in that connection: A person was admitted into the New York Hospital with grave symptoms and seen by Drs. Bulkley and Cock, was, on account of the bronzed discoloration of the skin, pronounced to have the mark indicated by Dr. Addison as attending disease of the supra-renal capsules. These organs, on post-mortem examination, were found healthy. This was among the many instances of exception to the rule laid down by Addison.

Dr. Flint had met with a case in the New Orleans Charity Hos-

pital, of marked bronzing of the whole cutaneous surface associated with idiopathic anemia. The supra renal capsules, however, were found after death perfectly healthy.

SCROFULOUS DISEASE OF THE EPIDIDYMIS.

Dr. Finnell exhibited a pair of testicles removed from a shoemaker, sixty-two years of age. About two years ago, when first seen by Dr. Finnell, he complained of pain and distress in both testicles to that degree as to prevent him from following his vocation. The pain was for the most part in the situation of each epididymis, and would not unfrequently shoot up the cord and occasion a good deal of distress in the lumbar region. On examination the testicles proved to be very little increased in size, but each epididymis presented a firm cartilaginous feel. Small doses of iod. pot. were prescribed, with an occasioal anodyne, and relief from pain was afforded for a few months, when a small sinus formed on one testicle, to be shortly after followed by one on the opposite organ. Both discharged a small quantity of ill conditioned pus. Becoming much annoyed by the pain and the discharge he desired relief by castration, and for the purpose of having the operation performed entered St. Vincent's Hospital. A consultation was held, and it was deemed unadvisable to interfere with the knife but belladonna was prescribed internally and locally. His condition improved, and when he left the institution one of the sinuses had healed, and the diseased parts did not seem to have enlarged. During his stay, however, he was subject to frequent and imperfect micturition. No stricture of the urethra was discovered. He shortly after returned with an attack of acute pneumonia, of which he died.

On post-mortem examination both testicles were found healthy, but throughout the whole extent of each epididymis tuberculous matter was deposited; and in one of the organs a small cavity was found.—*American Medical Times.*

Some Remarks on Neuroma, with a brief Account of Three Cases of Anomalous Cutaneous Tumors in One Family. By ALFRED HITCHCOCK, M.D., of Fitchburg, Mass.

The term Neuroma, according to Dr. Smith, was first introduced by M. Odier, of Geneva, in 1803, and has since become established in medical nomenclature to designate a *tumor connected with a nerve.* The ancients described the disease somewhat obscurely under the names of *ganglions, nodes,* and other less specific terms. Some modern writers have either confounded it, or made it identical with *painful subcutaneous tubercle.* Continental pathologists

have, in modern times, carefully studied the disease, and the results of their observations are condensed in the valuable work of Dr. Robert W. Smith, of Dublin, which was published about ten years ago. To that work I am indebted for many of the facts pertaining to the disease contained in this paper.

Neuromatous tumors are of Spontaneous origin, the consequence of morbid process, or the result of wounds or injuries. If they are idiopathic, and but one tumor exists, it is usually painful; but if many tumours exist, they are usually free from pain. The traumatic varieties of neuroma, whether single or many, are usually very painful. The tumors in the constitutional variety, which is to be considered in this paper, are usually oblong in shape, sometimes globular, and slightly pedunculated, and may vary in size from that of a millet-seed to that of an ostrich egg. They more usually exist upon the spinal nerves, but occasionally in the ganglionic system. The writer witnessed a dissection of the latter class, at La Charite, Paris, in 1852. In this case there was a multitude of tumors on the sympathetic nerve, from the size of a pea to that of an English walnut. The spinal nerves in the pelvis were also involved in the disease. The cutaneous nerves, I think, were entirely free from disease. A published report of this interesting case has not been found.

In general, the tumors are *solid*, with an *elastic feel*, and sometimes are said to be composed of a cyst filled with fluid. They are of very slow growth, and are slightly movable, especially laterally. Those formed on minute cutaneous nerves will disappear in the areolar tissue by firm pressure. The skin is not discolored over them, neither does it adhere to them, unless friction, or pressure, or other cause, has interfered with their natural development. Inflammation, suppuration, or absorption, seldom occurs in them. The true neuroma is generally regarded by pathologists as a disease of a *benign character*. Some, however, regard neuromatous tumors as cancerous; and it is unquestionably true that malignant tumors are occasionally found involving trunks of nerves. Several continental pathologists maintain that neuroma is a malignant disease; while Dr. Smith, in his valuable memoir, presents very strong reasons for its benign character. This question can hardly be said yet to be finally settled—certainly not more satisfactorily settled than with a pretty large variety of tumours, that are developed in other tissues of the body. The truth on this subject may yet be found in a solution of the question whether or not benign tumors ever degenerate into malignant. Mr. Abernethy, as is well known, favored the doctrine of such transformation. Professors Gluge, of Germany, and Syme, of Edinburgh, at present maintain the doctrine of the malignant degeneration of certain recurrent tumors. Mr. Paget also coincides in this view, and very aptly remarks that "recurring fibroid tumors assume more and more malignant features the oftener they recur." And he also adds: "Whatever be the truth concerning the supposed transformation of an innocent

into a malignant, morbid growth, I think it can hardly be doubted that, in the case of some recurring growths, the successively later growths acquire more and more of the character of thoroughly malignant disease." He also expresses (p. 394) considerable doubt whether the so-called painful subcutaneous tubercle "is identical with the fibro-cellular neuroma or not." According to Rokitansky (vol. iii. p. 347), neuroma should be ranked with the fibroid structures. He describes it as non-malignant, and says, "that with the exception of cancer, neuroma is the most frequent adventitious growth which occurs in the peripheral nervous system. In quantity, they may exist from one to countless numbers. In the latter case it constitutes a very *general disease*, as to the cause of which we are *still in the dark*. The size of the tumors bears no direct proportion to the thickness of the nerve on which it is formed; for, in point of fact, it has been noticed that those tumors which are situated on small branches, are relatively much larger than those which occupy the thick trunk of a nerve." He also says (vol. i. p. 213), "Medullary carcinoma has some sort of affinity to the medulla of the nervous system; this is evinced by the fact that in the eyeball this disease always springs from the retina or optic nerve, and nerves speedily perish in the range of medullary tumors."

Several writers have observed mental imbecility, idiocy, or cretinism, in persons afflicted with neuroma as a general disease. In the three cases of anomalous cutaneous tumors, in the Clark family, described in this paper, although a tolerable degree of intelligence existed, and a desire to act strictly conscientious, yet there is a very obvious imbecility and vacillation of the mental and moral powers. The expression of their countenances strongly corroborates this opinion, and justly conveys the impression that they are persons of weak intellect.

Case 1, *May 4th*, 1860. Mrs. Elizabeth Clark, wife of Peter Clark, deceased, was the daughter of Samuel and Abigail Brown, of Worcester, Massachusetts, where she was born, Oct. 3, 1779. Her parents "kept tavern," and in June preceding her birth, the weather being very hot, according to family tradition, her mother "melted herself." From this time she was sick, and kept her bed till the birth of Elizabeth. She was a tolerably healthy child, was occasionally troubled with a "rash," till thirty years of age, when the tumors in the skin began to appear. They have gradually increased in number, and some of them very slowly in size; have never been painful, except from injury, and they have always retained the color of the skin. In shape they are variously *oval*, *globular*, slightly *pedunculated*, or *merely* papular, oval *disks*. Some are hard like scirrhus, some have a firm, elastic feel, and some are soft, and readily disappear by pressure under the skin. None have the appearance of melanosis.

At this time the tumors cover the whole body—are most abundant on face, neck, thorax, and arms. In size they vary from that

of a pin's head to that of a hickory-nut. They number many hundreds, too many, in fact, to think of counting them. The tumors in her case, as well as in the daughter and son, have multiplied pretty steadily with advancing age.

The writer has procured photographs of all these cases for preservation.

Mrs. Clark is now nearly 81 years of age, is tolerably well, and her usual mental power is quite unimpaired. She gives the foregoing facts concerning her own history, and also states that her parents were healthy, without tumors, or *cancers*, or eruptions of any kind; and that none existed among their relatives, or among her own brothers or sisters, there being ten children in the family.

Mrs. Clark had seven children. Several of them died early of acute diseases. Only two of the children, Samuel B. and Elizabeth D., exhibited the cutaneous tumors like the mother. Her husband died many years ago of acute disease. He had brothers and cousins who died of cancer.

Case 2. In the case of the daughter, Elizabeth D. Clark, aged 54, the tumors began to appear at 10 years of age. One, near the clavicle, attained the size of a hen's egg, and was removed, when she was 21, by Dr. Torrey, of Windsor, Vermont. Another small tumor, on the lip, was removed, a few years ago, by the family physician, Dr. W. H. Bigelow, of Bolton. Neither of these tumors have ever returned, although she thinks the tumors in other parts of the body increased in number more rapidly after their removal.

Case 3. Samuel B. Clark, aged 46; single; factory operative, Bolton, Mass. About the first of June, 1856, consulted me for a painful tumour of the right arm. He was thin in flesh, pale, seemed timid, dejected, and almost childish when conversed with about himself. The history of the tumor he related as follows: About twenty-two or twenty-three years ago, he discovered a small, movable tumor on the right arm, just above the internal condyle of the humerus. This increased very slowly for twenty years, and did not interfere with the motions of the arm; was not sensitive or painful, unless compressed, or the arm used violently, when numbness, or pricking sensations, or acute pain, would extend to the fingers. About two years ago, the tumor began to increase in size much more rapidly, and the pain and discomfort were correspondingly increased. For nearly a year past he has been unable to labor, in consequence of the size and painful character of the tumour. At present, the tumour measures 6½ inches in its long, by 3½ in the short diameter, and is nearly a perfect ovoid. The lower extremity seems pretty firmly fixed at the internal condyle of the humerus, and the long axis extends in the direction of the axilla. The whole tumour is solid, elastic, smooth, movable, especially laterally, and evidently without adhesion to integument or bone. The skin is of natural color and sensibility, while pretty firm manipulation of the tumor is productive of great pain, chiefly

in the parts below supplied by the ulnar nerve. The tumor is regarded as encysted fibro plastic, requiring removal to escape the great pain and loss of use of the arm, caused by its rapidly increasing size and by the supposed *mechanical compression of the ulnar nerve.*

In this opinion Drs. Marshall, Wellman, and Cummings, of Fitchburg, concurred, and on the 16th of June, 1856, rendered valuable assistance in the operation for its removal. By a longitudinal incision the integuments were easily detached from the investing capsule of the tumor, and when carefully attempting to enucleate it, without injury to the ulnar nerve (which was expected to be found between the tumor and bone), it was discovered to be a tumor of *that nerve.* The ulnar nerve, in fact, appeared to be the axis of the spheroid, and at either pole was enlarged, the lower to three, and the upper to five lines in diameter; the capsule of the tumor was evidently composed of the neurilemma. The trunk of the nerve, from above, was spread out into a vast number of flattened fibres, partly dipping into the tumor, but chiefly running in curved lines, on its convex surface, like the network on a balloon, and subdividing till scarcely visible to the naked eye; and, at the lower part of the tumor, converging in more and more distinct lines to form the nervous trunk, where it passes over the groove of the internal condyle of the humerus. To save the nerve was found impossible, and it was accordingly divided, first above and afterwards below, and, there being no adhesions to the bone, the tumor was readily separated from its bed. Some of the muscles were displaced and atrophied, by mechanical pressure, but not involved in the disease. Only one artery required ligature; the tumor was not attached to the skin or bone. With the exception of a secondary hemorrhage, on the eleventh day, which was readily controlled by compression, the wound healed kindly, partly by adhesions, and partly by granulations, and with paralysis of the ulnar portion of the forearm, he returned to his home, in five weeks, calling himself "well."

It should be here stated that the tumors in the skin were observed at the time of the removal of the large tumor of the ulnar nerve. These cutaneous tumors were firmer and evidently more prominent than when he subsequently entered the hospital, in 1858, as described by the record.

The tumor weighed two pounds, avoirdupois; oval, smooth, solid, very elastic, and covered with an investing capsule, which could not be easily detached; the cut surfaces immediately presented a slightly convex appearance, and on firm compression several smaller convex disks appeared on the general convexity of the cut surface. The color was generally of a grayish, glistening white, in spots inclining to yellow, or a bluish, translucent white; appears succulent, and is partially friable in spots, yet is pretty firmly coherent by apparently fibrous or condensed areolar tissue. Dr. Wellman and myself examined the tumor microscopically,

and failed to find evidence of its encephaloid character, but did find evidence of its fibro plastic structure. Sections of the tumor were sent immediately to different microscopists. A portion sent to my brother, Dr. Homer O. Hitchcock, House-Surgeon at Bellevue Hospital, was examined by himself, by Drs. Alonzo Clark and J. C. Dalton, Jr., of New York, who concurred in opinion that it was of the fibro-plastic character, and without cancer-cells.

The following extracts of letters, from their distinguished authors, express their several views of the specimens from this tumor which were sent for their examination.

Of a specimen sent in alcohol to Prof. E. R. Peaslee, then at Hanover, N. H., he writes as follows:—

JULY 9, 1856.

I would not like to pronounce unqualifiedly on the character of a tumor in the circumstances, since the action of the alcohol must somewhat change the minute structure. In the first place, I do not find any reason for believing the growth *encephaloid;* second, it lies in my own estimation between neuroma and a modification of the ordinary *fibrous tumor;* and as I fail to find any thing characteristic of the former, I should be obliged, from the present specimen, and in its present condition, to think it the latter, of which it seems to me to present the characters. I should, however, hesitate to give a decided opinion in the circumstances.

Of a specimen sent to Dr. J. B. S. Jackson, of Boston, the day after its removal, he writes as follows:

BOSTON, June 20th, 1856.

DR. HITCHCOCK—*Dear Sir:* I received your specimen in good condition, and it has been examined by several others as well as by myself. No one of us, I believe, agrees in calling it *neuroma;* my own opinion was decidedly against that view of the case, and having had an opportunity to examine Dr. Smith's specimens and his plates side by side when I was in Dublin, I came to the conclusion that a very considerable variety of structures were described under that name; and that it might be very easy to confound neuromatous with tumors that simply involved or pressed upon the nerves. The light-colored portion I thought resembled what has been described as the fibro-plastic, and the yellowish opaque I supposed to be the result of a secondary action, probably inflammatory. The appearances of "encephaloid" vary much in different cases and in different parts of the same mass.

The light-colored portion of this tumor I should say varied very much in its gross appearance from an average encephaloid; far more I think than Dr. Bigelow would make it, judging from his note, which, as you will see by the date, I have just received. I expected, therefore, that it would be found microscopically to possess the usual fibro-plastic appearances, and I am surprised to find that there is so much of the encephaloid character. In regard to the general character of the disease practically I considered it when

I first saw the specimen, and after reading your history of the case, *to be cancer*, though not the most common form. I had little or no doubt that it would return and sooner or later destroy the patient, and I presume that my friends here agree with that first impression. The pure fibro-plastic tumor often enough returns and is fatal; but this case seems to have been a step towards encephaloid.

Dr. Jackson placed the specimen in the hands of Dr. H. J. Bigelow, of Boston, who expressed the following opinion:

JUNE 20, 1856.

Dear Sir: The tumor of which you sent me a portion of uniform structure, flat on section, tender and of a bluish translucent tint, although it resembles encephaloid in these respects, does not present the most frequent microscopic appearance of that disease; the cells having a tendency to excessive elongation, some consisting of an attenuated long nucleus, with at each end a long fibre; others elongated narrow bodies with parallel sides and blunt ends; others again merely ovoid and elongated nuclei, but nuclei and nucleoli all small. Yet these appearances correspond sufficiently with some other cases of undoubted cancer, and also with one of Paget's figures. I should consider also that the universal occurrence of these masses in the same patient was conclusive as respects cancer, if indeed they are not some also melanotic.

Dr. C. Ellis, of Boston, writes as follows to Dr. Jackson: "The tumor from the arm was examined by Dr. Shaw and myself. We both found round or oval granular nuclei, the nucleoli in which were comparatively small; also cells more or less elongated containing the same nuclei above described. Dr. Shaw was inclined to call the disease fibro-plastic. I do not deny that it might be so called, but would rather describe the appearance of the cells than give them a name."

The following is the record of the case at the Massachusetts General Hospital:

1858. Samuel B. Clark, aged 47; single; laborer; Bolton. Encephaloid tumor of arm. One year.

January 6. Family scrofulous, himself generally healthy, twenty-four years ago discovered a small movable bunch on right arm just above bend of elbow. This increased very slowly, at times seeming to remain stationary and not interfering with the motions of the arm. At the end of twenty years it began to rapidly increase, extending over to back of arm, retaining, however, its mobility, and not causing him any pain except after severe exertion, when the pain was of a dull aching character; never lancinating. It was removed a year ago last June by a surgeon of Fitchburg. It weighed two pounds; the wounds healed kindly. Last February the disease began to return, commencing, as previously, in the form of a small lump about two inches above internal condyle of humerus; growing rapidly, extending in either direction so as to completely encircle the arm, and becoming the seat of severe lan-

cinating pains; especially distressing at night. The growth is developed principally to the inside of arm, where a large spherical mass, hard and immovable, juts out; is continued round to outside of arm, where, however, the convexity is less marked, and extends upwards; all the while diminishing in circumference till the hardness disappears about five inches above elbow. In the axilla a firm hard cord can be traced downwards into the mass where it disappears. Pressure along this is productive of great pain. The circumference of the arm over the greatest convexity of the tumor is twenty inches. The integument covering the whole mass is reddened and adherent, large veins anastomose over its surface, one of which was ruptured about a week ago and now bleeds freely whenever compression is removed. Right forearm is cold; the muscles do not appear to be wasted. Hand droops; fingers are permanently contracted. Has been unable to use his hand for a month. Pulsation in radical artery feeble. A curious eruption of the skin also strikes the eye; most pronounced upon the back; sparse upon the chest and belly; looking like small pediculated tumors of the skin; wrinkled, flaccid and flabby, very soft, receding on the slightest pressure through the skin into the cellular tissue. These are the largest, a dozen or more in number of the size of a large green pea; but the earliest stage of this eruption is seen to be a minute papule sparsely disseminated over the trunk and on the forehead, and it is to be seen in intermediate stages. A few of the largest of these little tumors existed upon the amputated arm, and proved, on dissection, to lie in the cellular tissue, of a soft white material, though not easily torn, and to consist under the microscope of elongated nuclei, and cells identical with those found in the tumor.

Amputation at the shoulder-joint was performed by Dr. Bigelow with an upper flap by transfixion in the usual manner, January 9, 1858.

The tumor, on dissection, proved to lie beneath the muscles, being about eight inches in diameter, ovoid. The musculo-spiral nerve lay in a groove upon its surface enlarged but not adherent. The radical nerve was also detached by dissection from the surface of the tumor; but the ulnar nerve entered the tumor at its upper extremity and was immediately lost in its substance. Before disappearing it bulged like a sparrow's egg, this knob being encysted beneath the surface of the tumor, but readily pealing from it. Its point of emergence was entirely obscured by the adherent cicatricial and diseased tissue at the lower extremity of the tumor at the point of the old operation. The tumor was not adherent to the bone. Upon section it presented, on the whole, an encephaloid character, the centre seemingly more succulent, vascular, translucent, and mottled; the periphery more opaque, white, and lobulated with lymph, friable to the thumb without difficulty; the centre tougher. Microscopically the tumor consisted mostly of elongated nuclei, containing one or more nucleoli about one-fourth the width of a blood-corpuscle

and from two to four times as long, often bifid at the extremities, the nucleoli rather small than large, some tendency to fibroid tissue.

Omitting the daily record till April 22d, 1858, we find "Less pain than at time of last record, shoulder still quite sensitive, discharged well."

From Dr. W. H. Bigelow, of Bolton, I received the following terminal facts in Samuel B. Clark's case. He remained in the hospital till April 22, 1858, when he returned to Bolton, with the stump not healed but hard at one point. This rapidly increased in size and hardness, and finally became raw and bleeding. He wasted in flesh and died August 17, 1858. (A post-mortem examination was not made.)

Several important inquiries naturally arise from a review of these cases.

1st. Was Samuel B. Clark's tumor of the ulnar nerve a true neuroma?

2d. Is neuroma naturally *benign*, and does it sometimes degenerate into malignant disease?

3d. The small cutaneous tumors having been found by several observers clinically and microscopically identical with medullary cancer, how is it that such a crop of that disease has grown so inoffensively 30, 40, and 50 years on these three persons?

4th. Is it not possible or even probable that these tumors originate in minute cutaneous nerves, by reason of which their malignant tendency is modified or controlled, perhaps at the expense of intellect or some other manifestation of nerve power?

These inquiries open a field for research where the annals of clinical surgery and pathology afford but little information. With the hope of pursuing this inquiry further, I invoke the aid of the readers and contributors of this Journal to elucidate this rare and obscure disease.—*American Journal of Med. Sciences.*

Induction of Premature Labor. By C. D. MEIGS, M.D., Emeritus Professor of Midwifery in Jefferson Medical College. In a Letter to the Editor of the American Journal of Medical Sciences.

Dear Sir: I am not rarely consulted by medical gentlemen at a distance on the subject of premature labor and on forced abortion supposed to be rendered necessary by an ascertained deformity of the pelvis. Having had two such letters to answer this week, I considered that it might comport with the purposes of your excellent journal to say in it what appears to me to be the most advisable method in such cases. If you should publish this note it might not only prove acceptable to some of your readers, but it would save my time, in the way of answering inquiries.

Dr. Karl Braun, of Vienna, proposed, a few years ago, to open

the os uteri by means of what he called a "Colpeurynter," which is a small delicate bag or bladder composed of vulcanized rubber, to which is attached a syringe and a stop. This bladder, not bigger than a walnut, if introduced within the vagina, may be distended by means of the syringe with tepid water or air. It may be inflated or distended so as to become equal in size to a small fœtal head, and if the distension be gradually and very slowly effected it will not necessarily produce any distressing or painful sensation.

Now, as the uterine extremity of the vagina arises from the outer circumference of the cervix uteri, it is clear that such a distension as above supposed could not fail, after due time, to draw the walls of the cervical canal outwards, and so diminish the antagonism of the cervix and os uteri to that of the fundus and corpus uteri. This very condition of lessened resistance is all that is requisite in the case, because, as soon as the power of the fundus and body becomes preponderant, it will begin to force the ovum downwards, and at length, after dilating the cervix and os, expel it. I apprehend the method to be in all cases infallible; the condition being that the colpeurysis shall be properly effected.

To bring on a forced abortion in labor by the use of the stilette, or by injecting different medicinal articles or gases into the gravid womb, appears to me to be an encroachment, by medical people, upon those rules of art within whose sacred pale we may be held blameless, whereas we are not without blame when we transcend those barriers that are so clearly defined in our collegiate diplomas. Witness the instant death that recently occurred at Edinburgh, from injecting carbonic acid into the uterus, as related in your last number! But to gently remove the retaining power of the os and cervix by a moderate and reasonable colpeurysis, is really to do no violence to any tissue, the operation being merely to suspend an antagonistic force; thus rendering the method of colpeurysis the simplest and safest possible, and certainly unfailing in success.

Inasmuch as operations performed for the induction of premature labor, and of abortion, are not without risk to the patient; and as it is well known that there are wretches who are so abandoned as to desecrate the profession of medicine, and spurn their own honor in the low calling *teneros avellere fœtus*, I conclude that no regular and reputable member of the body will ever consent to institute such operations as this I propose, without the consent of a proper medical consultation: this is a matter of such great import to us all, that I consider it to be incumbent on the American Medical Association to take such order upon it as their wisdom may suggest. To lose a patient under any circumstances, is a source of grief to the practitioner; but to lose one subjected, without consultation, to the operation in question, can only be fitly denoted as a disaster. Our diplomas endow us with authority to practise within the rules of an art; and it ought to be enacted as a rule of practise not to do these things without consent of a consultation. Such a rule would probably restrain much looseness of conduct on the part of

some of the brethren; and might go even so far as to improve their morals, as is the admitted tendency of all salutary laws. I trust that you, Mr. Editor, who are a leader in things practical and æsthetical in our calling, will readily agree with me that it is neither safe nor decent for any single physician to order and perform one of these operations. Such sentiments, if known to be held by your great and powerful press, would do more good, perhaps, in the way of purging our brotherhood from these defilements, than half a dozen convictions and sentencings by the law courts.

Though I have already drawn out this note to a greater length than I designed, I ought not to omit the injunction of deferring the operation until after the period during which the ovum is covered up completely within its capsule called the decidua. Now, it is known that the whole ovum escapes from its deciduous investment or capsule at the one hundred and fifth day, or thereabout. If one would force on an abortion before that date, the deciduous capsule, which consists of the tubular glandular mucous membrane of the womb, must inevitably be ruptured or wounded, which is equal to a wound of the womb itself; but after three and a half months the ovum, which is at that period wholly escaped from the decidua-capsule, may reasonably be expected by means of the colpeurysis to be expelled whole and unbroken, in which case the risk to the woman is much diminished, not only because the entire product of the conception is thus eliminated, but also because no needless and hazardous violence is done to the membrana decidua.

I am, my dear sir,
With the sincerest regard,
Your friend and servant,
CH. D. MEIGS.

Inversion of the Hairs of the Labia Pudenda. By C. D. MEIGS, M.D., Emeritus Professor of Midwifery in Jefferson Medical College. In a Letter to the Editor of the American Journal of Medical Sciences.

My Dear Sir: Since I saw you yesterday, I have found, at page ninety-five of my "Letters to the Class," fourth edition, the relation of a case of pruritus vulvæ closely resembling that of our patient, Mrs. ——, and which was the subject of our conference.

The late Dr. —— had for some time had charge of the young lady, aged about 20 years, and suffering greatly from continual pruritus and heat of the vulva. Finding himself baffled in his trials of cures, he at length asked leave to make a physical diagnosis; and you may infer as to the severity of the young lady's distress that could induce her to yield assent to so trying a demand.

The inspection of the parts did not, however, provide for the Doctor means of cure more efficient than the preceding ones; so

that, the various washes and even the application of nitrate of silver having failed, he gave it over to me.

I was much surprised, on inquiry, to find the margins of each of the labia studded with long, straight, and stiff hairs, just like eyelashes, all of them directed inwards, and so, constantly teasing, irritating and vexing the mucous body of the interior, and producing a redness or florid tint of the membrane, with heat and the intolerable itching of which she so long had complained. I was struck with the analogy of the situation to that of the conjunctiva in those cases of conjunctivitis which you have often found to depend upon inversion of eyelashes or trichiasis. It was a case of real trichiasis, not before described, and probably not before noticed. I at least had not met with any such notice in the books.

I directed the offending hairs to be gradually eradicated by tweezers, which the lady's nurse accomplished after some days, and the patient was thus cured of an *incurable disorder.*

Now, my dear sir, our patient is in precisely a similar condition, both as to the distress and the cause of that distress; and I confidently expect that if she will accomplish the eradication of the offending lashes, "whose name is legion," she will find herself delivered from the annoyance.

You, who know as well as I do, how obstinate and how intractable are many of the cases of pruritus, will do, I think, a service to many distressed people, and shed a little beam of light on the path of many a bewildered colleague, if your widely known journal should assist to spread this little item of useful knowledge where my work has not been able to extend it.

I am, dear Doctor,
With the truest esteem,
Your obliged servant,
CH. D. MEIGS.

710 Walnut street, January 28, 1862.

Oxalate of Cerium in Epilepsy.

Dr. Ramskill has used oxalate of cerium lately at the Hospital for the Epileptic and Paralyzed. He says it has proved serviceable in some cases of epilepsy, having as an aura, or premonitory symptom of the attack, some commotion of the stomach or duodenum evidenced by a feeling of agitation at the epigastrium, accompanied by a sense of sinking, fainting, and disordered movement, but unconnected with palpitation. In three cases, which we shall give shortly, the epilepsy was cured. It has not proved useful in any degree in any other forms of epilepsy, where the premonitory symptoms had relation to the head, as vertigo, confusion, etc., nor to the heart, as palpitation, or feeling of cessation of the heart's action, nor, indeed, to any other variety except in the one men-

tioned, which seems, he believes, to have its origin in failure of action of the splanchnic ganglia. He thinks that the oxalate acts as a sedative and conserver of nervous force. The sedative action acting on the periphery of the pneumogastric, conveys this influence to the grand centre of excito-motory action, the medulla, and thus not only prevents an impending attack, but diminishes the chance of future fits by lessening morbid excito-motor sensibility. —*Med. Times and Gaz.*, Jan. 4, 1862.

Efficacy of a Combination of Cubebs and Copaiba in some Affections of the Neck of the Bladder and of the Prostatic Part of the Urethra.

Dr. Caudmont has employed cubebs and copaiba in different affections of the neck of the bladder and of the prostatic portion of the urethra, and the results have convinced him that these medicines exert a much more certain action over these parts than over the anterior portion of the urinary canal. In some cases, he administered the copaiba alone, in other cases the cubebs alone; but in general he combines these two drugs, because it appeared to him that the digestive organs were more tolerant of their administration in this form. The morbid conditions in which these medicines are indicated, may be referred to forms of neuralgia or inflammation. The neuralgic cases begin suddenly, without being preceded by any functional disturbance, and the symptoms are immediately very severe; there is frequent desire to make water, severe pain during that process, and especially at its conclusion, and darting pains along the inferior surface of the penis during the intervals of micturition. This neuralgic form occurs in persons who are subject to neuralgia in other parts of the body. The other class of cases presents an inflammatory character, and a few drops of blood are voided at the end of each act of micturition. The greater number of such cases may be referred to a blennorrhœal or rheumatic origin, and the urine deposits gravel, or contains a considerable quantity of mucus or muco-pus. In all these cases, whether neuralgic or inflammatory, the use of copaiba and cubebs is very successful, and entirely removes the pain in from twenty-four to forty-eight hours. Dr. Caudmont administers these medicines in the form of sugar-plums *(dragées)*, each containing forty centigrammes of the mixed cubebs and copaiba (a centigramme is .1543 of a troy grain), and fifteen, eighteen, or twenty-four of these are given every day, according to the intensity of the disease.—*Brit. and For. Med.-Chir. Rev.*, Jan. 1862, from *Bull. Gén. de Thérap.*, July, 1861.

Bibliographical Notices and Reviews.

A System of Surgery—Pathological, Diagnostic, Therapeutic and Operative. By SAMUEL D. GROSS, Professor of Surgery in the Jefferson Medical College, Philadelphia, Member of the Imperial Royal Medical Society of Vienna, etc., etc. Illustrated by twelve hundred and twenty Engravings. Second edition: much enlarged and carefully revised. In two volumes. Philadelphia, Blanchard & Lea. 1862.

July 8th, 1859, the author wrote his preface to the first edition of this work. January 1st, 1862, to the second edition. Such facts would seem to indicate both the popularity of the work and the promptness of the author in responding to the public demand.

The object of the work is to furnish a systematic and comprehensive treatise on the science and practice of Surgery considered in the broadest sense; one that may serve the practitioner as a faithful and available guide in his daily routine of duty. Indeed, to embrace the whole domain of Surgery and allot to every subject its legitimate claim to notice in the great family of external diseases and accidents is the author's aim. The work is founded upon courses of lectures delivered during the last twenty years in the University of Louisville, and in the Jefferson Medical College, in the latter of which the author received his degree, in 1828. It may also be stated, in this connection, that the author has been a practitioner of Medicine and Surgery for a period of more than thirty years. The work may therefore be regarded as embodying a large amount of personal experience.

The edition before us, besides having every chapter revised, contains a large amount of new matter. The subject of Gunshot Wounds, just now of such absorbing interest on this Continent, has received more than ordinary attention.

We have no space for details. We will state, however, that the work is divided into TWO PARTS: *General Surgery* and *Special Surgery*.

Under the head of General Surgery there are nineteen chapters:

Chap. I. Irritation, Sympathy and Idiosyncrasy.

Chap. II. Congestion.

Chap. III. Inflammation.
Chap. IV. Terminations and Results of Inflammation.
Chap. V. Textural Changes.
Chap. VI. Congenital Malformations.
Chap. VII. Tumors, or Morbid Growths.
Chap. VIII. Scrofula.
Chap. IX. Wounds.
Chap. X. Effects of Injuries on Nervous System.
Chap. XI. Syphilis.
Chap. XII. General Diagnosis.
Chap. XIII. Minor Surgery.
Chap. XIV. Operative Surgery.
Chap. XV. Plastic Surgery.
Chap. XVI. Subcutaneous Surgery.
Chap. XVII. Amputation in General.
Chap. XVIII. Excision of Bones and Joints.
Chap. XIX. Anæsthetics, or the Means of Averting Pain.

PART II. *Special Surgery*, or *Diseases* and *Injuries* of *Particular Organs, Textures*, and *Regions.*

A work which professes the character of a systematic treatise must necessarily contain the labors, to a greater or less extent, of all who are, and have been, engaged in cultivating the department. No one individual, it may fairly be presumed, could rely entirely on his own resources even if all the diseases and all the accidents, which the work before us professes to discuss, had come under his notice. Moreover, there is scarcely a disease or an accident that any one man, however gifted, can say he has mastered. Our present knowledge, is made up of the labors of the dead of thirty centuries, and the little that the present generation has added.

Inflammation, that usually figures in the first chapter of treatises on Surgery, is as old as figurative language, and has received attention largely from all those aspiring to teach; and who is there now that thinks over what he knows of the process, even with the lights thrown about it lately by the microscope, without the sense of mortification from his own deficiencies. If practice were taken as a test of acquaintance with it, it might be doubted whether we now know as much as did the ancients.

A work then, such as the one before us, is rightly regarded, when taken as a *résumé* of the labors of the trust-worthy of our own and previous ages. The author has shown himself to be very compe-

tent to look through the labors of the past, as well as note the improvements of his own day.

The first chapter of the work before us takes up *Irritation*, Sympathy, and Idiosyncrasy. To have omitted these altogether would have been a small sacrifice, if judged by the knowledge we possess of them. Much of what has been written on such topics has necessarily been obscure. A reason for this is suggested by the author. He thinks they have been treated of unphilosophically. Well, perhaps they have. But has the philosophical method of the author made things transparent? For our own part, after reading him over on these knotty subjects—and by the by he has made a very good effort—we yet feel the scales over our eyes. The case is abandoned as hopeless, by the author's failure to complete the first part of the work of properly considering any subject, viz: *definition*. The question, for example, is asked: "What is Irritation? Is it an entity or a myth, a certain undefinable something which no one can see, but which every one may recognize by its effects?" The author says, "perhaps it is a disordered state of the *nerves*, unattended with inflammation. * * That it essentially belongs to the nervous, as inflammation does to the vascular system." Here are two assumptions, one predicated upon the other. It is assumed that inflammation pertains essentially to the vascular system, therefore irritation pertains to the nervous. Is the former true? Does blockading the Mississippi, or turning it out of its channel, imply original fault in the stream itself? When will authors cease diluting their works with speculations on such subjects? The generation that is to succeed us ought, for humanity's sake, to be spared a portion of the trouble we have had in getting rid of the rubbish of a former one.

The practical part of this work will be found up to the times. The latest improvements in the treatment of surgical diseases, and the new methods of operating, are fully, very fully, set forth.

In manner there is little to criticise. Although more terseness might have been acceptable, the work of getting at the meaning of the author is far from being a fatiguing process. In both matter and manner, therefore, we look upon this production as a very clever one in its line. It has been well received at home; and we may state in this connection, that a translation of it into the Dutch language is now in progress at *Nieuwediép*, in Holland, and will appear at an early day.

On Bandaging and other Operations of Minor Surgery. By F. W. SARGEANT, M.D., Member of the College of Physicians, Philadelphia; one of the Surgeons to Wills' Hospital, etc., etc. New edition. With an additional chapter on Military Surgery. By F. W. ATLEE, M.D., and one hundred and eighty seven Illustrations. Philadelphia: Blanchard & Lea. pp. 383.

This little manual appeared first in the year 1848. A *Second* edition was issued some seven years hence; and now we have the *Third* edition. Owing to the absence of the author in Europe, this has been prepared by F. W. Atlee, M.D.

The intention of the author has been to present to the younger surgeon and to the student information relative to the art of bandaging and other points of importance in Surgery. Such subjects are but slightly alluded to in systematic courses of lectures, or in the most of the published treatises on the science; yet the necessity of a familiar acquaintance with them will be readily acknowledged by every Surgeon of experience.

The materials for this volume, it will be noticed, have been collected from the most approved books; and to these we have added the extensive experience of the author in hospital and private practice.

The book is divided into five parts: The *first* embraces a description of implements; the *second* treats of the composition and preparation of bandages; the *third* is devoted to the consideration of apparatus of various kinds used in the treatment of Fractures; the *fourth* describes the mechanical means used in the treatment of dislocations, with the mode of applying them; the *fifth* details at length the methods of performing such operations as seems to be included in the term "Minor Surgery."

The last chapter has been added by the editor of the present edition. It pertains to Gunshot wounds and such other subjects peculiar to military surgery as seemed requisite to adapt it more thoroughly to the wants of the army.

Border Lines of Knowledge. An Address introductory to a Course of Lectures in Harvard Medical College, Boston. By O. W. HOLMES, Prof. Anatomy and Physiology.

We have sketched this production sufficiently to see that the

author has put himself into it pretty thoroughly. The scope to us appears to betray an effort to right-up a little. "Currents and Counter Currents," with the profession of Massachusetts, did not take. The "*silver hoe*," as a cure for typhoid fever, was a little too much indeed for the œsophagus of the North-East.

The production before us attempts to draw the line between *what we know and what we don't know.* Or, perhaps it might be better characterized as an effort to show, that after all, we are merely paddling about in the dark. The author goes swaggering over the medical sciences, cuffing them around as though there had never been a Haller or a Hunter. Before he got to Chemistry we thought there was a breaker ahead for him. But we give it up; he demolished the concern in short metre. Of course, other branches surrendered without "firing a gun." Anatomy held out a little, and so did Physiology; but both were vanquished, and asked quarter. Who, we thought, after witnessing the author's effort, could help exclaiming, *sic transit gloria mundi!* or, "A vandal has been among us, and behold the desolation!"

Badinage aside, how much more useful one who has the access of our author to the public ear, might make himself, by dwelling on the bright side of the picture. Nobody claims perfection, or any thing approaching it, for Medicine. But certainly the experience of three or four thousand years is worth something, and certainly every generation, by cultivating the physical sciences, has given us something that is worth heeding, at least, until something better is known. Why attempt to tear down a building, however rickety, without being able to build a better one in its place? The leading folly of all ages has been blind *analysis.*

Editorial and Miscellaneous.

Drs. Hewitt and Stipp.—The following has been issued by the Secretary of War:

"Grave complaints against Assistant Surgeons Hewitt and Stipp having reached the Department, they are suspended from duty, and ordered to report themselves. A negligent or inhuman surgeon is regarded by this Department as an enemy of his country and of his race, and will be dealt with according to the utmost rigor of the military law."

We noticed the complaints of newspaper correspondents, or rather of one correspondent, against Drs. H. and S.; but had no idea at the time that they would prove true. Complaints against physicians in private and public business are of every day occurrence. No one can please all his charge, at least we have never seen one so fortunate. Complaining is the normal state of a good many people. All cannot be relieved, it matters not what care they receive. Some must suffer and die, and this will be their lot irrespective of wisdom or "humanity." But that any sane surgeon has been capable of treating those under his care inhumanly, is a proposition so monstrous that opinions may well be suspended until the proof is furnished. With a quarter of a century's experience, mixing up all the time freely with medical men, and knowing no little of their movements with reference to their patients, we have seen, to this hour, no instance of "inhuman treatment" of a patient. Dr. Hewitt is from New York city, and is a gentleman of ability, and has a good character at home. Of Dr. Stipp we know nothing, except in connection with these reports. The complaints against both will now of course be investigated, and we believe will, as in the case of Surgeon Porter a few weeks since, prove groundless.

Assistant Surgeons.—A law has just passed the Legislature, authorizing the appointment of thirty additional surgeons. The troubles of the last few weeks have made this measure necessary. After the battle of Shiloh, our surgeons were literally overwhelmed with labor. Hundreds of wounded soldiers lay on the spot where they had fallen, for days after the battle, unprovided for in any

way whatever, because of the insufficient number of surgeons on hand. Those who were present exerted themselves to the utmost, but their number, all agree in stating, was too small for the occasion.

The number of killed and wounded it has been difficult to estimate. The returns thus far show, of the six Divisions of Gen. Grant, and the three of Gen. Buell: killed, 1735; wounded, 7882. Of the wounded about 300 have since died, and 1000 more are expected to die.

Owing to exposure both before and since the battle, that it would be difficult to exaggerate, and to the pestilential atmosphere of the region, our ranks since the battle, it is said, have been almost decimated by disease. Add the fact that another battle is expected, and who will regard this corps of thirty additional surgeons as sufficient for the emergencies? The truth is, Gov. Tod was more nearly right when he asked the Legislature to provide for the appointment of *sixty* additional surgeons. It may also be stated in this connection, that quite a proportion of surgeons have died, resigned, or returned home in bad health.

Qualification of Army Surgeons.—A bill passed the Senate a few days since, placing the graduates of every institution called "Medical College," on the same footing, so far as eligibility to appointments in the army is concerned. The bill was defeated in the House. Both branches, however, passed a law repealing the Act of last year creating a "*Board of Medical Examiners.*"

Although the power to appoint is really in the War Department at Washington, it is nevertheless not exercised further than in furnishing blank commissions to the Governors of the several States, who fill them up.

In this state of things, Gov. Tod and Surgeon-General Weber have concluded to summon the Board of Medical Examiners to come forward and again resume work. The Board meets on Thursday the 8th inst., in this city. It is composed, as when it last met, of Drs. Murphy, Cincinnati; Russell, Mt. Vernon; and Woodbridge, Youngstown.

Gov. Tod has just inaugurated a very important and humane policy with reference to the sick and wounded of Ohio Volunteers. Vessels have been dispatched, properly fitted up and supplied with physicians, to all of the hospitals of the Mississippi Valley, outside

of the State, for the purpose of bringing our invalid soldiers home. This measure will place these poor soldiers more immediately within the reach of relatives and friends, where everything which sympathy and kindness can suggest will be employed for their recovery.

There is not the least reason to believe that the Ohio soldiers now scattered about in the hospitals of other States, are not well cared for, as well as they could possibly be among strangers; but "home, sweet home," how tonic and invigorating the thought! Nature, just ready to succumb, will, under its influence, rally and perhaps triumph.

American Medical Association.—The meeting of this body, which was to have taken place in Chicago, has been postponed another year. This action has been taken by the Executive Committee in view of our present political troubles. It is to be hoped that another year may find the country, as heretofore, favorable to the meeting of East, West, North and South in council, devising means to save life and lessen suffering. Almost every organization now of the Continent has yielded to the analytical tendencies of the age except the Medical.

The British and Foreign Medico-Chirurgical Review.—This able Quarterly, that we have been in the receipt of for so many years, the re-publishers of in this country, S. S. & Wm. Wood, New York, inform us by letter, is discontinued on account of political troubles. The whole profession will regret this. The work came to us every three months, full of treasures. By it, perhaps more than any other journal, we have been made acquainted periodically with European Medicine. The tone of the work has always been exalted; indeed, it has been ballast for both Continents.

We regretted very much to hear that when the House of Representatives had before it the bill authorizing the appointment of a Board of Medical Examiners, no little animadversion was indulged in by members in regard to medical science, its professions, utility, etc. Our sense of mortification, however, was deepened when we heard that the principal actors in the disgraceful drama were those who professed to have some knowledge of medicine, and in the

halls of legislation acknowledged and answered to the cognomen "doctor."

It is a very difficult matter to make an individual understand a plea or an argument in favor of any science, unless he is versed in the principles thereof. Argument, therefore, is useless with those who are unacquainted with medicine. It is also equally troublesome to imbue gentlemen who have not succeeded well in medicine, with ideas of its importance. They make their failures the standard of comparison. In view of such facts, suppose we make a case for our doubting friends.

Take for example a nation or a people without any knowledge of Anatomy, Physiology, Pathology, Therapeutics, Materia Medica, Pharmacy, Chemistry, Hygiene—for these are the sciences that constitute the Medical—and what would be its condition? A little sober thought here might be of service to those who take interest in such matters.

Ohio State Medical Society.—This body will convene at *White Sulphur Springs*, on the third Tuesday of June next. We are authorized to state that the members of the Society will receive the usual attention. The proprietor, W. A. Wilson, Jr., has leased the Springs the ensuing season to Messrs. Warden & Emery, of the American Hotel. These gentlemen, we are assured, will take great pleasure in ministering to the wants and comforts of the members of the Society.

In view of the emergencies of the country, it is to be hoped we may have a full meeting.

Brettanneau, one of the celebrities of Paris, indeed one of the most able men of Europe, died a short time since. Brettanneau, besides contributing to our knowledge with reference to a variety of diseases, distinguished himself by his labors on Diphtheria.

At Paris, 15th January last, also F. Q. Moreau, an able accoucheur of that city, senior Professor of the Faculty of Medicine, Paris.

When Robert Southey, in his erudite and curious inquiries concerning Dr. Daniel Dove of Doncaster and his horse Nobs, comes to the interesting period in the Doverian history when Dr. Daniel,

like many other Daniels and Doctors before him, dallies with Venus's mischievous, rollicking boy, who has created more stir in the world than any other young gentleman with or without wings, Mr. Southey, like a very sensible historian, recognizes in his materials for a new chapter two rather incongruous ingredients—love and physic—and declares he will not mix them up together. When an individual meditates upon the "fitness of things," he may be very easily led to a conviction that nothing is more incompatible than romance and rheumatism, poetry and physic, ipecac and inspiration, and may come to consider Donne and Blackmore, Garth, Arbuthnot and Akenside as examples of professional obliquity, and to have been under the influence of strange gods, or to have been forsaken of Esculapius and cast off from his keeping. If medicine itself was not a powerful sedative to a hot imagination; if medical study did not institute a free mental catharsis of all poetic "vapors" (if the tuneful frenzy may be explained in the manner of Swift's elucidation of the divine art of Belching), if the Art of Healing did not crowd out of a man the art of love and the art of poetry, and subsoil his soul and turn under all useless plants not medicinal, as the "flowers of thought," there would be a medical Fadladeen at every corner to guide the medical Fermoraz, and to repress all poetic tendencies in young gentlemen having professional aspirations. The nature of her "course" is sufficiently adequate to this purpose without the duty being imposed on her individual professors.

We reproduce here an anecdote of Sir Humphrey Davy, from Mr. J. Cordy Jeaffreson's amusing "Book about Doctors," in illustration of the idea that scientific pursuits and poetry do not go on harmoniously together. Sir Humphrey, though not a medical man, belongs to the medical profession more than any other. In his younger days, it is positively asserted, he wrote verses which were of sufficient merit to induce his friends to hope that he would some time be able to ride with grace his Pegasus up the mount of song as high as any mortal of ordinary ambition might desire to go—up in the neighborhood where "daring Milton" sits, at any rate. But when he grew somewhat older, Humphrey turned his attention to scientific pursuits, and the steed, as usual in such cases, threw him; and we will venture to assert, that if in his old age he had essayed to court the muses, the nymphs would have thought him a

vain, fussy old fellow, and inspired him with a glow such as they threw over a certain old doctor who commenced a lyric thus:

"Inoculation, heavenly maid, descend!"

Fortunately or unfortunately Davy turned his attention to science, and in a few years his poetic sensibilities were obtunded, and his appreciation of artistic performances obliterated. How decidedly unpoetic it is for a man who started out in life as a poet, to admire pictures according to the frames they were in, and covet a piece of statuary merely as a geological specimen! Although (and how sad it is to remember it) Talfourd wandered through the Louvre because it had been the elysium of his friend Hazlitt, but was as ignorant of its treasures as Humphrey Davy.

When Davy passed through the galleries of the Louvre in 1809, says Mr. Jeaffreson, he could find nothing more worthy of admiration than the fine frames of the pictures. "What an extraordinary collection of fine frames!" he observed to the gentleman who acted as his guide, amidst the treasures of art gathered from every part of the Continent. His attention was directed to the "Transfiguration," when, on its being suggested to him that he was looking at a rather well-executed picture, he said, coldly, "Indeed! I am glad I have seen it!" In the same way, the statues were to him simply blocks of material. In the Apollo Belvidere, the Laocoon, and the Venus de Medicis, he saw no beauty; but when his eyes rested on the Antinous, treated in the Egyptian style, and sculptured in alabaster, he made an exclamation of delight, and cried, "Gracious powers! what a beautiful stalactite!"

"There was in him," says Mr. Jeaffreson, "on some points an extravagant eccentricity, which in most men would have pointed to imperviousness to ridicule. The demands of society, and the labors of his laboratory, of course left him with but little leisure. He, however, affected not to have time enough for the ordinary decencies of the toilet. Cold ablutions neither his constitution nor his philosophic temperament required, so he rarely washed himself. And, on the plea of saving time, he used to put on his clean linen over his dirty—so that he has been known to wear at the same time five shirts and five pairs of stockings. On the rare occasions when he divested himself of his superfluous integuments, he caused infinite perplexity to his less intimate friends, who could not account for his rapid transition from corpulence to tenuity."

W. A. B.

The Royal Society of the days of Sydenham, Mead, Radcliffe and Sir Hans Sloane, was something different from what it now is. Such subjects as the divining rod, and the celebrated Sympathetic Powder of Sir Kenelm Digby, occupied the attention of its members. On its records are entries such as the following:

"Col. Tuke related the manner of the rain like corn at Norwich, and Mr. Boyle and Mr. Evelyn were entreated to sow some of those rained seeds, to try their product.

"Magneticall cures were then discoursed of. Sir Gilbert Talbot promised to bring what he knew of sympatheticall cures. Those that had any powder of sympathy were desired to bring some of it at the next meeting.

"Mr. Boyle related of a gentleman who, having made some experiments of the ayre, essayed the quicksilver experiment at the top and bottom of a hill, when there was found three inches difference.

"The Duke of Buckingham promised to cause charcoal to be distilled by his chymist.

"His Grace promised to bring into the Society a piece of a Unicorne's horne.

"Sir Kenelm Digby related that the calcined powder of toades reverberated, applyed in bagges upon the stomach of a pestiferate body, cures it by severall applications."

B.

Clinical Notes on Intemperance and its Prevention. By Robert Druitt, M. R. C. P.—The causes and prevention of intemperance well deserve the attention of medical practitioners. Not only because there is a large and influential body—the teetotallers—who absurdly accuse us of being the direct promoters of intemperance through our sanction to the use of fermented liquors as articles of diet, and as medicines; but because intemperance in its most lamentable form may be met with in all ranks, in the most refined as well as the lowest, and because it may spring from certain definite causes which it is within the province of medicine to cut off by the roots.

All hope of prevention lies in the doctrine that intemperance is a secondary, and not a primary vice; and that, although when once established it is the parent of a hideous brood of evils moral

and physical, yet that it is itself a *consequence* of foregoing disease or error. Early in my professional life, circumstances led me to see and reflect much on it, and I now venture to write from the conviction that much good would result if the conditions which commonly lead to it were more systematically acknowledged and subjected to medical treatment.

The properties which cause alcoholic liquors to be abused are those exerted on the stomach, heart, and nervous system. They enable the stomach to deal with refractory articles of food, and abate the painful sensations of hunger. They quiet the perturbations of a feeble heart; and they modify the entire state of the nervous system. Especially, they alter the current of thought; they may be used legitimately to neutralize the effects of grief, and enable a man to work on undisturbed by fear and despondency; on the other hand, they may be abused for the purpose of stifling the warnings of reason and conscience, and enabling a man to live with self complacency in the midst of degradation and poverty.

The most cursory examination leads us to divide drinkers into two classes. First, the open, gregarious, convivial, riotous set, who indulge in the habit for the sake of pleasurable excitement, and of whom the majority are men. Persons of this class drink because they know of no better or more intellectual enjoyment; they are the victims of bad education and bad social customs. Medicine may assist in relieving them from the after effects, but can scarcely do much by way of prevention. That must be sought by improving popular education, and increasing the opportunities of healthy recreation.

The other class are the secret, solitary drinkers—most of them women. They deserve all commisseration, because they are dragged into the habit for the relief of miseries moral and physical, which medicine can do much to remove, and which I propose to consider in order.

First, there are such as concern the stomach. Dyspepsia in all its forms, more especially when aggravated by a scanty or unsuitable diet, is a great temptation. But there is one peculiar form or symptom of dyspepsia which is an almost overwhelming one. This is a feeling which may be described as bulimia—an intense, overpowering, sickening sense of emptiness, with ravenous desire for food or stimulants, and often some degree of vertigo. The frequency of this symptom renders it well worthy of attention, for

its causes are most diverse, and its pathology can only be expressed by an indefinite reference to some morbid condition of the par vagum. It differs from ordinary hunger in the rapidity with which it comes on and its persistence after food. It is common in the stomach disorders of the youngest infants. Here it usually depends on liver congestion, and is relieved by proper medicines; although it is made the pretext, by nurses, for asserting that "the milk doesn't satisfy," and for craming the unfortunate little patients with all sorts of solid food and stimulants, even including alcohol. A yellowish eye, red lips and tip of the tongue, frequent micturition, more or less constant restlessness with occasional fits of severe colic, and an insatiable craving for the breast, are the too familiar symptoms. In older children, it is a very common symptom of impending illness, from depraved secretions in the alimentary canal, and worms. In adults, it very often shows itself under similar circumstances. It may be caused by protracted fasting. I know a member of our profession, who went one night to sit up with a patient. He had been much hurried, and had lost his dinner, and on coming to the patient's house with an intense feeling of hunger, found no refreshments prepared for him, and through *mauvaise honte*, did not ask. He passed the hours between eleven and five in the greatest uneasiness, with the sensation as if fifty rats were gnawing his stomach. That sensation never left him for two whole hours together for six months; during which he was extremely reduced by feeble digestion. He was finally cured by diet, but confessed that his craving for brandy was terrible, and that he might have been made a tippler. Salvatori, whom Dr. Christison quotes as giving in 1817, the earliest description of dipsomania, describes the same symptom. That which predisposes to intemperance, he says, is "a disordered state of the abdominal ganglionic system of nerves, allied to that which causes in children the raveneus appetite constituting the disease bulimia, and in adults the wide spread disorders we are in the custom of calling hypochondriacal and hysterical. Tapeworm brought on the craving for drink in nine out of fifty patients noted by Salvatori. That has never come within my experience; but the unnatural craving, or hungry dyspepsia, has been incessantly noted by me as an evidence of what is called congestion of the liver, and a forerunner of gouty and rheumatic attacks, and of those disorders which lead to headache and vomiting, and are vulgarly called bilious sick head-

aches. I attended for some years a girl who had about once a year an attack of rheumatism. Her heart was damaged, and she had mitral regurgitation. She learned by experience to know when her illness was coming on, for she had two premonitory symptoms: one, an eruption of patches of erythema on her elbows; the other, a most intense craving for food, and especially for drink. She would go down into the kitchen at night, and eat and drink everything she could lay hands on, particularly beer; and yet at other times her appetite was very indifferent. After the hunger and the erythema came pain in the ankles; then pain in the region of the heart, consolidation of the upper lobe of the right lung, and hæmoptysis. The significance of these facts in explaining periodic intoxication will be noticed hereafter.

This ravenous sense of hunger is remarkably common after circumstances which create great nervous exhaustion. I have known it after confinements. On one occasion a patient suffered a protracted confinement, and a milk abscess afterwards, and was brought into a state of nervous exhaustion. She was sleepless and irritable, but the chief symptom was the extraordinary demand for food, wine, stimulants, and opiates, and the tolerance of enormous quantities. Not an hour passed without beef-tea, wine, sandwiches, panada, or some other most concentrated nourishment, and a remonstrance was addressed to me by the family, lest I should be laying the foundation of intemperate habits. Her entreaties for the strongest opiates were curious. I have seen the same thing after surgical operations and accidents, and have known habits of intemperance to ensue from gratifying the inordinate sense of hunger attending the growth of a prodigious fibro-plastic (or sero-cystic) tumour of the breast. Grief may be attended with the same feelings, as I shall relate in order. What I want to insist on now is, that this feeling of emptiness is not mere debility, a physical result of loss of blood, or famine, for it may exist when the stomach is full; neither is it a healthy appetite intensified; but that it is a disordered sensation, a subjective hunger felt when there is no real emptiness; a neuralgia, in which the pain takes the shape of hunger, and is usually attended likewise by some degree of vertigo, or sense of cerebral faintness.

The tendency to such feelings is vastly increased by past habits of voracity and intemperance, and by everything which tends to make the stomoch large. The voluminous and atonic bowels of

women who have not been well bandaged after their confinements, are, to my knowledge, sources of danger on this score; for a big belly, like too large a house, must be furnished somehow.

So much for the stomach. As for the heart, it is often implicated in the conditions which give rise to intemperance, as well as in those after effects which are produced by long indulgence. But I do not think the heart is often primarily to blame.

Nevertheless, patients with hypochondriac symptoms often complain of their hearts, as for example in that set of symptoms which may be called "idiopathic terror." A poor woman is sitting quietly, when all at once an indescribable feeling of shock comes over her; something seems to flash through her brain which fills her with the most intense alarm; all the symptoms are identical with those of sudden fright, and amongst them are the pale face, the panting distended alæ of the nostrils, and the rapid tumultuous beating of the heart. In this, as in many other disordered states of the nervous system, the heart is intensely perturbed; but I have never satisfied myself that any primary disorder of the heart creates hypochondriasis, or the desire for drink. Both stomach and heart do so, only if they disturb the brain.

There are certain general states of bad health which create the tendency to drink, if it so happen that they affect the nutrition of the brain. It is an ultimate fact that in some states of intense debility the mind may be clear, vigorous, and cheerful. Persons dying of lingering disorders sometimes have fits of syncope, which seem as if they were going to end fatally, but pass off, and allow life to go on a little longer. Dying persons have told me their sensations. A friend of mine who died after a very lingering illness told me a day or two before his death, that he had had a fit of faintness that morning; he had lost all consciousness of outward objects, but preserved his mind clear and calm, expecting every moment to be summoned into the presence of his Judge. He desired to die; and great was his disappointment when he found himself again becoming cognizant of the too familiar objects in his chamber. Life was here flickering at the lowest ebb, yet not a trace of mental depression. In other cases, on the contrary, the slightest deviation from vigorous nutrition induces great mental disturbance. Pain alone seldom does so, although neuralgia and chronic rheumatism sometimes create a demand for stimulants, through the exhaustion attendant on pain, sleeplessness, and hopelessness.

But as for debility with mental depression, it is almost impossible to over-estimate its dangers. The miseries of the first walk during convalescence, or of the first entry into business, of being obliged to stand, and maintain an attitude of attention, when feeble and listless, are greater than those of any pain. Then there are the disastrous effects of bodily weakness on the mind; the peevishness and bad temper, the habits of procrastination, the shifty, deceitful tricks, and the false excuses coined to palliate want of punctuality. Weakness is more immoral than poverty itself. Add to this what is called *nervousness*, a kind of moral cowardice, and dread of seeing any new face, or beginning any new business. Consider besides that many diseases, especially of the malarious kind, not only rob the body of its strength, but leave the blood in a poisoned state, so that the hypochondriasis resulting from impure blood is superadded to the mental feebleness arising from bodily exhaustion.

In relation to this part of the subject it may be asked, What influence has the administration of wine in sickness in creating a morbid taste for drink during convalescence? For some years I have made it my duty to institute careful inquiries on this point, especially as to the fate of patients who have been rescued from fevers by enormous quantities of wine and brandy. My inquiries have led me to two positive conclusions. That any amount of wine may be given during an illness without leaving the slightest craving for it afterwards; that patients who greedily swallow it when ill, lose their taste for it when it becomes needless; and if they be vigorously treated and vigorously followed up, so as to be restored to good health, they are safe. But when patients are not treated vigorously, when they are left half cured, when they are obliged to return to their work before their strength is fit for it, and then when some demon comes in the shape of a friend who recommends gin or beer without food, there is great danger that a habit of drinking may be created.

It is the common slander of the teetotalers that we make people drunkards by recommending them wine or beer when ill or weak. Again, there are few women tipplers who do not say they were advised to drink by their medical attendants. It is certain, therefore, that practitioners cannot be too cautious in defining the exact quantity of any alcoholic drink they may prescribe, and the exact times, and the food that should be taken with it—and this more

especially in illnesses of a chronic and debilitating sort, as menorrhagia, abortion, and, above all, diseases arising from malaria, as ague and neuralgia, than which none make greater havoc of mind and body.—*Med. Times and Gazette*, Jan. 11, 1862.

Growth of Cinchona in India.—Dr. Anderson has returned to Calcutta from his mission to Java, with the large number of 412 cinchona plants of three species, and with half a million of seeds. The cultivation of the cinchona in Java, which began with 139 trees in 1855, has hitherto been most successful, but the Dutch do not possess many specimens of the variety whose bark yields the largest proportion of quinine. Dr. Anderson was enabled to supply them with some of the best specimens in return for their liberality and courtesy. Of one species the Dutch have now no less than a million of plants, and of two or three others they possess several thousands. In June, 1857, the whole number they had was only three hundred, so rapidly have they propagated themselves. The well-known German naturalist, Dr. Junghuhn, is in charge of the plantations, and he was recently joined by Dr. de Vry, a chemist not unknown in England to the members of the British Association. The report of the first of these gentlemen, now before us, details, with a scientific prolixity which we shall not inflict on our readers, the various steps of the experiment. South-west of Tjibodas, 4100 feet above the sea, in the very centre of Java, natural forests extend for miles, the soil consisting of loosely heaped blocks of trachytic lava. To this spot, under the shade of wide-spreading branches, the plants which had withered in a more exposed locality, were transferred in October, 1857. Six months after, they began to die in their new habitation, and the cause was soon discovered in a small beetle of the "bostrichus" species, never before seen in the Java forests, which deposited its brood in the trunk. After many difficulties and experiments with soils and localities, the Malawar mountains have proved the best spot. The slightest differences of altitude, light, and temperature, affect the *calisaya* variety. The hardiest, though least valuable, is the *lucumaefolia*, but if the former be planted early in good, loose, forest soil, and moderate shade, particularly in the region of from 5000 to 5700 feet above the sea, it grows up as tall and luxuriantly as any.

Each capsule of each plant contains an average of twenty-five seeds. One *calisaya* yielded 485 capsules, and each good plant may be said to yield 1300 seeds. Of 2000 well developed seeds sown with care on cleared soil under the shade of trees, only one grows to a real plant; for the slightest touch, even of a drop of water, or a crawling worm, kills the root of the young germ. At first the plants grow slowly, but after two years they are two feet high, and then shoot up with great rapidity if raised from seed. The plants thus successfully introduced, an important question arises—Will they yield as much quinine as in their native home in Peru! To test this Dr. de Vry was sent to Java, and he records with no little triumph how, on 21st July, 1858, two and a half years after the first plants were introduced, he was enabled to produce a pure white crystallized quina alkaloid from the bark of one of those stems which the beetle had destroyed. Soon after he obtained from a *calisaya*, not five years old, the same percentage of quinine which the Bolivian trees yield, or 3·12. At the end of 1861, the experiment in Java, only six years old, has thus succeeded most completely. Many of the trees are now thirty feet high.

This is full of hope for India, where the plant is now being grown under exactly the same conditions. The total number of plants is 5847, and more than half are of that red bark variety which is most valuable, the dry bark selling at from 2*s.* 6*d.* to 8*s.* 9*d.* per lb. Rich as are the forests of Bolivia, from which the world draws its sole supply at present, they will not last long. Formerly the trees were every where found around the inhabited parts of the region, but now to meet with one of a tolerable size it is necessary to penetrate several days' journey into the forest. What India is doing as a substitute for North America in rice and cotton, she must become for South America as an exporter of quina bark. We believe a nursery will be shortly established on the Khasia Hills. In less than ten years India should supply herself with all the quinine she needs. In a few more, sulphate of quinine as well as quina bark should bulk largely among her exports.—*Friend of India.*

Fever among the Rich.—Fever, fighting for each foot of ground against the preventive physicians who seek to assail its

strongholds, has retreated from the haunts of the poor to the houses of the rich. An efficient body of health officers have occupied themselves in this metropolis with driving fever from the filthy purlieus of the poor; they have swept away the abominations which invited it to those favorite camping-grounds. In the city alone five thousand cesspools have been removed, and with them the cohort of zymotic fevers which dwelt in the brooding miasms of their surrounding atmosphere. The poorest neighborhoods are now well drained, and kept free from sewer gas and the like sources of disease. During the last few years the mortality from fever was so much lowered as to give signs of the manifest success with which the officers of health had fought the good fight. But fever has found a new refuge, and again deals widely its fatal strokes. The houses of the rich have not the intelligent care and supervision which by law are given to the dwellings of the poor. This defect has been much debated by the health officers, and recently at their meeting it was resolved, in discussing a paper by Mr. Lyall, pointing to this want, to obtain powers for the health officer in respect to the construction of new dwellings, in some measure correlative with those given to the district surveyor. The wealthy have left open in their houses loop-holes, through which fever can enter by gullies, untrapped drains, and similar defects of sewerage. The enemy has entered, and the middle and upper classes of the metropolis are now suffering from typhoid fever—the fever of filth, of sewerage gas, and of tainted water. The returns of deaths from this cause, which had fallen, are now rising again. The increased mortality is not amongst the poor, for they are still in their former favorable condition in this respect. In the autumns of 1859 and 1860, when the mortality from the disease was not nearly so high as it is now, the number of fever cases attended amongst the poor by the medical officers of the city unions was from 301 to 313 in the quarter—making an aggregate of 10 per cent. of the sickness returns; but during the quarter which has just expired the number of fever cases amongst the city poor has been only 76, which is barely 3 per cent. of all the sickness. No fact can indicate more strongly the migration of fever to the houses of the upper classes. They too must call in the systematic supervision of the health officer.—*Lancet.*

PHENOMENON OF HYBRIDITY IN THE HUMAN GENUS.—Broca has by careful researches been led to the view that the various races of man are different species of the same genus. He exposes as inconclusive the principal arguments adduced in favor of the unity theory, and dwells especially on the incorrectness of the assertion generally made by the defenders of this theory with regard to the phenomena of hibridity in the various races of man, and in various species of animals belonging to the same genus. It has been set forth as the most irrefutable proof of the unity of the human species, that hybrid productions of two different races of man are perfectly able to propagate themselves, while hybrid procreations of two species of animals of the same genus are said to be unable to do so. Broca, however, shows, first, that some of the hybrid productions from different races of man, possess only a limited power of propagation; and, secondly, that some hybrid species of animals, as those from the crossing of the dog and the wolf, the goat and the sheep, the dromedary and the camel, the hare and the rabbit, are perfectly able to propagate their species.—*Brown-Séquard's Journ. de Phys.*, vol. iii. 1860.

CASE OF EPILEPSY SUCCESSFULLY TREATED.—Amongst the great number of epileptic persons who attend the out-patient rooms of Dr. Brown-Séquard at the Hospital for the Paralyzed and Epileptic, nearly every form of the disease occurs, and singularly anomalous symptoms are observed, The seizure may have its precursory symptoms in contractions commencing in every muscle of the body. The fit was initiated in one boy, whom we saw there last week, by violent contractions of the abdominal muscles. Dr. Brown-Séquard referred to a similar case, in which the epilepsy was pointed out to him as probably due to an existing tenderness of the stomach. On examining this, it proved to be caused by considerable hypertrophy of the recti abdominis muscles, the physiological effect of increased action in their incessant spasmodic contractions. In other cases, the muscles of the bladder are first affected; and in a patient of Dr. Brown-Séquard so situated, the warning of the fit was given by a violent spasmodic contraction of the bladder two hours before the fit commenced. This was so violent that the urine was projected several feet from the body, and it

was immediately followed by a deep and irresistible sleep. The muscles of the lower bowel have been suddenly affected in other cases, and here the motions are expelled with violence, and straining effort continues after the bowel is empty. In all these cases phenomena may be observed which seem to indicate the local and irregular disturbance of the circulation of the brain—irregular contractions of the arteries—causing congestion of one part and anæmia of another.

In the first case mentioned, and in many others, the greatest benefit has resulted from the use of belladonna and quinine, steadily pursued for many weeks. Belladonna is one of the remedies most effective in the treatment of simple epilepsy. It is, indeed, one of the few rational remedies for the disease. The other remedies most commonly useful in the practice of Dr. Brown-Séquard at this hospital are, the ammonio-sulphate of copper, the valerianate of atrophine, and the citrate of iron and strychnia. The last is a definite compound, containing the one-hundredth of a grain of strychnia to one grain of the salt.

Amongst the most protean cases are those due to the presence of worms in the intestinal canal. In these the very wide range of symptoms sometimes in itself forms a guide to the cause of the disease. The elimination of the worms does not, however, always suffice to effect a cure; the diseased habit of the nerves requires to be treated. In children, Dr. Brown-Séquard orders commonly salt-water injections, with purgatives, and subsequently belladonna and quinine. There are many cases on the books in which cure has followed.

In a remarkable case, now favorably progressing, the fit is preceded by water-brash and the flow of saliva in the mouth. In another case, the patient is seized, without warning, with a sudden jumping of the limbs of the right side; these become fixed and contorted, and he stands statue-like in the street or elsewhere, with one side of the body immovably and singularly distorted, but without loss of consciousness. This patient has been greatly benefited by the use of belladonna and quinine.—*Lancet*, Feb. 8, 1861.

Polypus of the Rectum.—Although surgical writers have always regarded this disease as a rare one, modern surgeons are

now beginning to discover that such is not the case, and that examples are not infrequent among the out-patients of a Metropolitan Hospital Mr. Bryant informs us, as the result of his experience, that the disease is by far the most common in children, and in those under two years of age; and the chief symptom by which the presence of the growth may be recognized is bleeding from the bowel. In adults, this surgeon affirms that the affection is comparatively of rare occurrence, the experience of Guy's Hospital certainly well supporting this assertion.

We give the following case as one amongst the most recent which have taken place in Mr. Bryant's practice:—Francis D., a boy aged 10 years, was brought by his mother to Mr. Bryant on January 10, for hemorrhage from the bowels. The bleeding had appeared at times for one year, but for the last three months it had been very constant and profuse; it came on, however only when at stool. Upon making an examination with the finger, a polypus, the size of a large nut, was detached and hooked down, a ligature was applied to its pedicle, and on the third day the growth came off. No bleeding followed, and convalescence was speedily established.—*Med. Times and Gaz.*, Feb. 8, 1862.

Progress of Growth according to Age.—Prof. Quetelet has established from his calculations the following positions as regards the inhabitants of Brussels: 1. The most rapid period of growth commences immediately after birth, the infant increasing about two decimètres in the space of a year. 2. The proportionate increase of growth then diminishes as age increases, until towards the fourth and fifth year, when the child, attains its maximum of probable life. Thus, during the second year, the amount of growth is only one-half of that of the first, and during the third year about a third. 3. From the fourth to fifth year, the increase becomes pretty regular until towards the sixteenth year—that is, until after the period of puberty—the annual increase being about fifty-six millimètres. 4. After the age of puberty the growth continues to increase, though only feebly. Thus, from sixteen to seventeen years it increases four centimètres, and in the two following years two and a half centimètres. 5. The total growth of man does not seem completely terminated at the age of twenty-five. M. Quete-

let also found that the height of the inhabitants of the town exceeded that of the peasantry.—*Med. Times and Gaz.*, Jan 4, 1862, from *L'Union Méd.*, No. 148.

Coccygodynia.—This affection, to which attention was drawn by Professor Simpson, a short time since, is said by Scanzoni to be far from rare, for he has seen twenty four cases of it during the last four years. It has been, he says, frequently mistaken for a symptom of some disease of the genital organs, which often accompanies it; and also for hemorrhoidal pain. Dr. Scanzoni has never observed the disease except in women who have borne children; and in nine cases, the patients distinctly traced the origin of their pain to the date of their confinement. Of nine women, six had only had one child; and in five cases, the pain appeared after instrumental labor.

We may, therefore, consider that the act of child-bearing is the essential, if not the sole cause of this pain; and we can readily understand why this should be the case, when we recollect the injuries to which the coccyx is liable during confinement. The violent forcing of the lower part of the bone backwards, sometimes to the extent of half an inch, and the stretching and tearing of the attached ligaments, are quite enough to excite inflammation and exudation between the bones which form the coccyx. That this really does frequently happen is shown by the researches of Luschka, who pointed out the frequent anchylosis of the bones of the coccyx which takes place. Dislocation of the bone, of the kind here spoken of, must evidently cause pressure upon and injury of the nerves, by the tearing and rupture of the ligaments which naturally protect and sustain them. Hence, we can readily understand why the delivery of the child should be the cause of coccygodynia.

The persistence of the affection is to be ascribed in part to the peculiar relations of the coccyx to the parts around it, and in part to the diseases which so frequently accompany it. When any change in the position or structure of the bone has taken place, every movement of the lower extremities, sudden sitting down or rising up, or even evacuation of hardened feces, must produce a movement of the bone. Affections of the neighboring organs also

aid in keeping up the coccygodynia. Chronic metritis, ulcerations of the os uteri, anteversion and retroversion, very often accompanying coccygodynia. Dr. Scanzoni cannot, indeed, recollect a single case which was not attended by some one of these affections. He has, for example, seen cases in which the coccygodynia immediately ceased, when an anteverted uterus was reduced to its proper position; or when arrested menstrual function was removed. In these cases, we must consider that the persistence of the coccygodynia (originally excited by the act of parturition) is maintained by the affection of neighboring organs.

As regards the treatment, Dr. Scanzoni considers that it is of the first importance to remove the affections of any neighboring organs. He is satisfied that no local treatment is of any avail so long as any of the neighboring organs either press upon the bone or excite the coccygeal nerves. The first business of the physician, therefore, is to endeavor to ascertain the state of the neighboring organs and parts. When the coccygodynia is recent, a few leeches, or cupping, should be frequently applied over the bone, warm effusions, hip-baths, etc. The patient should maintain a horizontal position, and refrain from all violent exertion. The bowels should be kept loose. These means are sometimes followed by a temporary cure; but the pain generally returns after a time. In such cases, when there is no sign of inflammation, Dr. Scanzoni has found subcutaneous injections of morphia of great service; and he cannot, like Dr. Simpson, regard them as merely palliative. He has not found the sulphate of atropine so efficacious as the morphia. Dr. Scanzoni has not yet tried subcutaneous section of the muscles and tendons, as recommended by Dr. Simpson; for he had never met with a patient in whom the intensity of the pain was such as to require such an operation, which is not without danger.—*British Med. Journ.*, Dec. 28, 1861, from *Wurzburger Medicine Zeitschrift.*

On Certain of the Early Symptoms of the Eruptive Fevers. By Dr. See.—To say that a child is about to have an eruptive fever, and to announce beforehand that the disease will be measles, scarlatina, or small-pox, is a point of great interest, if not for the child, at least for the practitioner. It is the surest

means of acquiring, from the first, the confidence of the family, for there is no doubt that people think more of the accuracy of the diagnosis and prognosis of a physician, than of all the care and intelligence he may have shown in the treatment of the case. "Let us see, then," said Dr. See, "what are the prodromata of the eruptive fevers of which the observation is important."

A character common to the eruptive fevers is the suddenness of invasion, accompanied by a peculiar state of precordial anxiety, as pointed out by Borsieri. In typhoid fever the invasion is preceded by a lengthened period of discomfort; the child has lost its gayety, and is fatigued without cause; this state lasts for several days.

Scarlatina is sometimes ushered in by symptoms which simulate cholera. Six months ago Dr. See was sent for to see the grandchild of a physician, who, at two o'clock in the afternoon, had been seized with choleraic symptoms. Dr. See could not see the child till half-past five o'clock. By this time, however, the eruption of scarlatina was manifest. Had the physician arrived sooner, he would not have seen the eruption, but he would have examined the throat, and would infallibly have found the angina which always precedes and accompanies scarlatina.

Measles does not give rise to vomiting, which, however, is a premonitory symptom of scarlet fever and small-pox. If then there is vomiting, and no affection of the throat, examine the arm. If the vaccination cicatrix be well marked, there is every chance that the small-pox will be mild. One of the constant precursors of small-pox, and on which Professor Chomel always laid great stress at his clinique, is pain in the loins. Also examine the back, for it is there that the first spots of small-pox make their appearance. In small-pox, also, the fever is continuous. In measles the premonitory fever is often remittent, or even intermittent. You have seen a child in the evening, feverish; next morning he seems lively, you are told that he has taken food, and you go away fancying that the little attack has passed off; then the fever returns, and soon other symptoms announce that the child is about to have measles; these other signs are the lachrymo-nasal catarrh, which appears about the third day. It may be said that influenza presents the same symptoms. No doubt, the resemblance is pretty close. There is remittent fever, subject to exacerbations, and towards the third day the nose and eyes are affected. But to

remove all doubts, it will be sufficient to auscultate the chest. If the disease is influenza, you will find already (by the third day) the signs of bronchitis; whilst if you have to do with measles, the results of the examination will be negative. In fact, it is on the fourth day that a child who has had a remittent fever, followed by a lachrymo-nasal catarrh, is seized with the characteristic cough. This cough, with its muffled sound, sometimes suggests to the parents the idea of croup, or hooping-cough. It is neither one nor the other; it does not come on in paroxysms. As in influenza, it consists of separate coughs closely following one another, and which continue till the eruption makes its appearance.

One word on a complication which may render the diagnosis of certain eruptive fevers obscure. The scarlatina eruption sometimes appears within the first six hours, rarely later than twenty-four; but it sometimes happens that small-pox is preceded by a scarlatiniform eruption, which has been especially described in England. This rash is sometimes limited to the belly. But even here there is no room for doubt. The rash does not appear till the second day, and if you examine your patient minutely from head to foot, you will find, especially on the back, some spots of small-pox. In fact, when the rash is present, the small-pox eruption has already commenced. Twice, a distinguished physician of Paris compromised his reputation by announcing scarlatina, while Chomel found, by examining the back, that he had to do with cases of small-pox.—*Edinburgh Med. Journ.*, Dec. 1861, from *Journ. de Méd. et de Chirurg. Prat.*, Oct. 1861.

A Novel Marriage License.—M. Giordano, professor of midwifery at the University of Turin, gave this year the lecture introductory to the business of the session, and alluded principally to deformities of the pelvis in relation to marriage. So impressed is the professor with the importance of a capacious pelvis in a married woman that he proposes the following regulation: "Every woman shall be required, before signing the marriage register, to produce a certificate respecting the proper conformation of her pelvis." Another summary measure touching pelvic organs has been proposed by M. Larghi, of Vercelli: as a preventive of puerperal fever, the lining membrane of the uterus should be well brushed with a solution of nitrate of silver.—*L'Union Médicale.*

IODIDE OF POTASSIUM.—This salt is one of the remedies which has of late steadily increased in general favor. This may, perhaps, to some extent be explained by the fact to which we have frequently adverted, that recent researches have proved many hitherto obscure affections to be really due to remote syphilitic taint. Although very valuable in some forms of rheumatism, and in procuring the absorption of inflammatory products generally, yet it is against the tertiary forms of syphilis that this salt best shows its specific power. Of late years the customary dose has much increased, and eight to ten grains is now with many of our Hospital Surgeons an ordinary prescription. Considering the enormous quantities which are prescribed both in Hospital and private practice, and the rarity of any observable ill effects, it is quite clear that for the most part it exerts no evil influence. Wasting of the breasts and testes, the bugbears of former times, are now never heard of, and anything like iodism is certainly exceptional. The addition of ammonia to all mixtures containing the iodide of potassium is now a very common practice. We mentioned it some years ago as having been strongly recommended, amongst others, by Dr. Gull at Guy's, and by Mr. Paget at St. Bartholomew's. Mr. Paget used to remark that he considered five grains of the iodide with half a drachm of sal volatile equal to ten grains of the iodide alone. With some Surgeons, and especially in the treatment of syphilitic diseases of the nerves or brain, the addition of tincture of nux vomica is frequently made.—*Med Times and Gaz.*, Jan. 4, 1862.

AGE OF THE PROFESSORS OF THE FACULTY OF MEDICINE, PARIS.—M. Moreau, recently deceased, 72; Cruveilhier, 71; Rostan, 71; Piorry, 67; Paul Dubois, 66; Velpeau, 66; Andral, 64; Bouillaud, 64; Langier, 63; Jobert de Lamballe, 62; Trousseau, 60; Guillot, 59; Moquin-Tandon, 57; Malgaigne, 55; Nelaton, 54; Denonvilliers, 53; Gavarret, 52; Bouchardat, 51; Grissolle, 50; Longet, 50; Tardieu, 45; Wurtz, 44; Gosselin, 43; Jargavay, 42; Regnault, 37.

ABOUT 100,000 cinchona trees, which produce the Peruvian or Jesuit bark from which quinine is distilled, are now flourishing in the Dutch settlements in Java. A few years ago there were only

a small number of these trees there, and which were reared from seeds obtained from Peru. The cinchona has also been planted in the Neilgherry hills in India, with great success. Measures are about to be taken to plant the tree in Ceylon.—*Dublin Med. Press.*

Death from Chloroform.—Mr. G. Turnley reports (*Lancet*, Feb. 22, 1862) the following case of death from the inhalation of chloroform, which occurred at the General Hospital at Hobart Town, Dec. 13, 1861:

"The patient, a fine muscular man, thirty five years of age, was put under the influence of chloroform for the purpose of having the left testes removed, that gland being the seat of malignant disease. The anæsthetic was administered in the usual way, and great care was taken to insure a proper admixture of atmospheric air. Nothing peculiar occurred during the inhalation; the breathing was remarkably quiet and regular; there was no turgescence of the superficial vessels of the head or face; and in about four minutes from the commencement of inhalation the patient was fully under the influence of the drug. At the moment that soporose breathing commenced the pulse became feeble, and the chloroform was immediately withdrawn; the pulse, however, rapidly failed, and in twenty seconds ceased to beat. The ear applied over the præcordial region could not detect the slightest action of the heart. During this period respiration continued regular, and after the entire cessation of the heart's action the patient made eight or ten regular inspirations and expirations, two or three irregular ones, and respiration ceased. Cold water was dashed on the face, fresh air admitted to the apartment, and the Marshall Hall ready method at once resorted to; ammonia was applied to the nostrils, friction to the extremities, and a galvanic current passed from the spine, through the thorax, to the diaphragm. All these measures were applied without delay, and unremittingly persevered in for nearly an hour, but without success.

On post-mortem examination, no trace of organic disease could be detected; the blood was fluid, and the organs generally congested. At the moment that the heart ceased to beat the ventricles were in a state of dilatation; the valves were perfectly healthy; and the muscular tissue of the organ did not exhibit the slightest trace of fatty degeneration.